

"Cravenette"  
RAIN COATS

Must have this Circular  
Trade Mark stamped  
inside of coat.



RECEIVED  
FEB 3 1908

Department of Agriculture

# INDIA RUBBER WORLD

CAOUTCHOUC  
HEVEA BRASILENSIS



GUTTA-PERCHA

Edited by HENRY C. PEARSON—Offices, No. 395 Broadway, NEW YORK.

Vol. XXXVII. No. 5.

FEBRUARY 1, 1908.

35 CENTS.

\$3.00 Per Year.  
\$3.50 Abroad.



AGENCIES  
GORMAN RUBBER CO., 4th and Washington Sts., OAKLAND, CAL.  
GORMAN RUBBER CO., 8th South Broadway, LOS ANGELES, CAL.

AGENCIES  
DENVER RUBBER CO., cor. 18th and Welton Sts., DENVER, COLO.  
GORMAN RUBBER CO., 320 1st Ave., South, SEATTLE, WASH.

— "THE DISTINCTIVE LINE" —

# Faultless

## RUBBER SUNDRIES & SPECIALTIES

(SEAMLESS, HANDMADE & MOULDED.)

### The Faultless Rubber Company

ASHLAND, OHIO

NEW YORK OFFICE  
ROTHSCHILD BLDG 43 LEONARD ST.

CHICAGO OFFICE  
OGDEN BLDG 34 CLARK ST.

BOSTON DIE CO.  
Cutting Dies and Rawhide Mallets  
17 Chardon Street, BOSTON, MASS.



BENZOL THE MOST POWERFUL RUBBER SOLVENT — SAMUEL CABOT (Inc.), Boston, Mass.

MARK OF QUALITY

ESTABLISHED 1854

SPECIAL ATTENTION GIVEN TO EXPORT BUSINESS. CORRESPONDENCE AND INQUIRIES SOLICITED.

**The Canadian Rubber Co. of Montreal**

MANUFACTURERS OF **LIMITED**

ALL KINDS OF HIGH GRADE GENERAL RUBBER GOODS

AND SOLE MAKERS OF THE

**Celebrated "CANADIAN" Rubbers**

We are always open to correspond with experienced Rubber men, both for Factory and Executive Work.

Factory and Executive Offices: **MONTREAL, P. Q.**

Inventions kindred to the Trade and ideas for development, invited. Our Development Department gives these matters special attention.

Canadian Sales Branches: HALIFAX, N. S., MONTREAL, Que., TORONTO, Ont., WINNIPEG, Man., REGINA, SASK., CALGARY, Alta., VANCOUVER, B. C., VICTORIA, B. C.

D. LORNE MCGIBBON, Vice-Pres. & Managing Director. J. C. NICHOLSON, Manager Mechanical Goods. M. C. MULLARKY, Manager Footwear Dept. R. J. YOUNGE, Sales Manager. E. LLOYD JONES, Sect.-Treas.

**B. LOEWENTHAL & COMPANY**

NEW YORK, 136 Liberty St. BUY AND SELL

CHICAGO, 162 5th Avenue. IN ANY GRADE

Cable Address "Gylowall" New York. Lister's Code Used. IN ANY QUANTITY.

**SCRAP RUBBER**

**WILLIAM H. SCHEEL**

Registered Cablegram Address, "OBLIGATO," New York

**Merchant**

Telephone 540 John

159 Maiden Lane and 37 Fletcher Street  
NEW YORK, NEW YORK, U. S. A.

Rubber Makers' Necessities and Supplies for Producers of Surfacers, for Waterproofing, Saturating Materials and Electrical Insulating Purposes, viz.:

RUBBER SURROGATES	LIME FLOUR
White and Brown	PIGMENTS
SULPHURETTE-ANTIMONY	Standard and Brilliant
Golden and Crimson	VERMILION
RED OXIDE	ROSIN Chemically Treated
HYPO BLACK	SHELLAC
CHLORIDE OF SULPHUR	GILSONITE ASPHALTUM
GENUINE LITHARGE	HYDRO CARBON
Powdered and Flake	MINERAL RUBBER
SULPHUR	ELASTIC COMPOUND
VEGETABLE BLACKS	COMPO BLACK
BLACK FILLER	WAXES, Ceresine, Ozokerite
BISULPHIDE CARBON	VARNISH MAKERS' SUPPLIES
TETRACHLORIDE CARBON	INSULATING COMPOUNDS

PLEASE WRITE FOR QUOTATIONS

We are alert to present unknown natural products to the producers of rubber goods and others so soon as our investigating department finds them of sufficient interest.

**ADOLPH HIRSCH & CO.**

Importers and Dealers in

**Brazil Manicoba and Sheet Rubber**

OF ALL DESCRIPTIONS

BRIDGE ARCH, 17 Frankfort St., NEW YORK

Telephone 3194 Beekman Cable Address "Adhirsch"

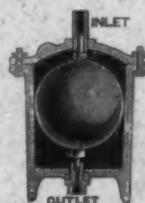
**Furnish Us Your Address**

if you are interested in the EUROPEAN India-rubber, Gutta-percha, Asbestos, and Celluloid industry, so as to enable us to send you free of charge a sample copy of the "Gummi-Zeitung," the leading organ of the Continental manufacturing interest. Address:

**GUMMI-ZEITUNG**

DRESDEN-A, SAXONY, GERMANY

Mention The India Rubber World when you write.



**THE EUREKA STEAM TRAP.**

In construction the most simple; in work, just as good as its construction is simple. Used by the Navy, Steel Mills, Paper Mills and Rubber Mills. Indispensable for Presses and Vulcanizers.

**OSGOOD SAYEN,**  
421 Arcade Building, Philadelphia, Pa.

Mention The India Rubber World when you write.

, 1908

ED.

Real

ED

Trade  
invited.  
t gives  
on.

SK.

RES.

SS

ber,

o as

copy

the

G

ANY

P.

ork,

ple.

fills

ers.

, Pa.









Published on the 1st of each Month by

THE INDIA RUBBER PUBLISHING CO.,

No. 395 BROADWAY, NEW YORK.

CABLE ADDRESS: IRWORLD, NEW YORK.

HENRY C. PEARSON,  
EDITOR.HAWTHORNE HILL,  
ASSOCIATE.

Vol. 37.

FEBRUARY 1, 1908.

No. 5.

SUBSCRIPTIONS: \$3.00 per year, \$1.75 for six months, postpaid, for the United States and dependencies and Mexico. To the Dominion of Canada and all other countries, \$3.50 (or equivalent funds) per year, postpaid.

ADVERTISING: Rates will be made known on application.

REMITTANCES: Should always be made by bank draft, Postoffice or Express money orders on New York, payable to THE INDIA RUBBER PUBLISHING COMPANY. Remittances for foreign subscriptions should be sent by International Postal order, payable as above.

DISCONTINUANCES: Yearly orders for subscriptions and advertising are regarded as permanent, and after the first twelve months they will be discontinued only at the request of the subscriber or advertiser. Bills are rendered promptly at the beginning of each period, and thereby our patrons have due notice of continuance.

COPYRIGHT, 1907, BY

THE INDIA RUBBER PUBLISHING CO.

Entered at New York postoffice as mail matter of the second class.

TABLE OF CONTENTS ON LAST PAGE READING MATTER.

## NEW YORK'S POOR FIRE HOSE.

THE pride which all good New Yorkers feel in their fire department, with its brave and vigilant uniformed force and its liberal equipment of fire apparatus—the heavy cost of which the public pays gladly—has received a severe wound through recent revelations regarding the character of much of the fire hose in use and the conditions under which it has been supplied. On the theory that no chain is stronger than its weakest link, no fire department is really well equipped without the best hose than can be bought, and the failure to supply such hose endangers not only the property exposed to ravages of fire, but also—and this is a vastly more serious matter—the lives of the firemen, not to mention the occupants of buildings in flames.

The mayor of New York has ordered a drastic investigation into the quality of the fire hose in use in the city, the alleged insufficiency of the supply, and the conditions under which the hose has been bought. Reports which compel attention are to the effect that many engine houses are without a normal equipment of hose in quantity, and that the quality of much of it is so poor that the department authorities are afraid to make the periodical tests required by the rules lest it fail to stand them. The city's hose inventory still includes lengths put into service 18 years ago, but the record of hose burst at fires

## OUR NEW LOCATION.

THE offices of THE INDIA RUBBER WORLD have been removed to No. 395 Broadway, at Walker street, where larger and better quarters than those occupied hitherto have been secured. The members of the rubber trade and any other friends are always welcome at the new location, the same as at the old place. Please remember that the address is now No. 395 Broadway.

makes a worse showing for lots recently purchased than for older lots.

What has led to the activity of the mayor in the matter, the first instance of the kind in the history of the mayor's office? Not the watchfulness or the interest in the matter of any city official, either in or outside the fire department, although the charges made, if true now, have been true for years. We have just been looking over several annual reports of the fire department, including the latest, and in these volumes of over 300 pages each we find scarcely a single mention of fire hose, and these do not refer to the subjects which now are to be investigated by the mayor's order. That is to say, the city's chief executive, if he has depended upon his subordinates for information, has had no reason to suspect that the hose supply is not of the highest efficiency.

It has remained for the fire underwriters to send experts into every fire house in the city and study the hose question in detail, the result of which has not been published widely. And the Merchants' Association, following the disastrous Parker building fire, has supplemented the demand of the insurance people for vigorous official action. Doubtless we shall see many public servants each trying to place the blame on some one else, but the first and most essential thing to be done is to buy more hose and good hose, and create a system under which no other kind can be bought for the city in the future.

The position in this matter of the fire hose manufacturers calls for a word of comment. The city does not go to a rubber manufacturer and buy hose; it draws up specifications which it insists shall be followed by the manufacturers. The result is that many manufacturers, it is said, refuse longer to bid on those specifications, not being willing to guarantee hose made according to them. In other words, the city becomes responsible for the quality of the hose it buys, and not the manufacturers, who have no voice in the quality of the goods supplied.

New York is about putting into use a new high pressure water service, which will call for stronger hose than has yet been ordered, which opens new problems in fire hose construction. But whether for the regular equipment or for the new service, it occurs to us that experts in the manufacture should have a voice in the drawing of the specifications and not the fire department officials alone, no matter how capable these may be.

Prominence is given here to this subject in the belief that the considerations involved may apply in some degree to many cities other than New York.

### PRICES OF RUBBER AND THE DEMAND.

THERE have been some expressions of surprise, in rubber planting circles, that the decline in the selling price of rubber during several months past has not already led to a largely increased demand for the material. This was due to the idea that, with lower prices than have prevailed of late years, rubber might become available for new uses from which it has been barred by its high cost. Such increased demand would presumably check the decline lately started and perhaps give the market an upward turn.

Speaking generally, this theory has a basis in reason, and no doubt many manufacturers could mention lines of rubber goods the sale of which might be largely increased if they were produced at prices lower than what are now regarded as standard. But every important new departure in the industry requires time for development. In the matter of rubber tiling, for example, which has been referred to as a line which might come into much wider use with lower priced rubber available, manufacturers would have to be better assured than they now are that rubber is to remain on the present basis of cost, and possible new consumers would require a similar assurance before buying freely. But the mere fact that rubber sells for less to-day than one year ago has no bearing upon what it may cost six months hence. A continuation of the present price level, however, for two or three years, might justify the belief that the era of "dollar rubber" was at an end, and gradually the trade could adjust itself to the condition of cheap supplies.

It should be understood that the demand for rubber is not automatically controlled by fluctuations day by day in the market for crude. Nor do prices of rubber goods follow closely the rise and fall of prices of raw material. There is reason to believe that a large proportion of the raw rubber now going into use was bought at a much higher figure than current quotations. Manufacturers, in fact, appear on the whole to be so well stocked that the lowest recent prices do not encourage them to buy. But rubber bought at to-day's prices will not reach the consumer, on an average, short of several months to come, and not until then could the manufacturer offer better discounts than now. Those factories which turn out goods for store doubtless have in hand now stocks made of crude rubber bought at the highest price of the past year.

But for the encouragement of the rubber planter it may be suggested that when people really want rubber goods high prices do not deter them from buying. At no time in the history of the industry has the consumption of rubber been so great as in the past two or three years of unprecedentedly high prices. The new automobile tire industry, in particular, may be mentioned as having been built up under these conditions. It is doubtful whether lower prices for rubber would increase greatly the sale of tires; people who require them will pay what is asked, and other people will hardly buy at any price.

Just now the buying of all goods, including rubber manufactures, is on a reduced scale in many countries, whatever may be the reason, involving a check upon the production of goods, all of which has tended to lower the price, among some other raw materials, of india-rubber. Such conditions have occurred before and may be looked for again, and when a revival of trade comes it is only reasonable to expect that the demand for rubber will more nearly approach the volume of supplies than at present. Should the net result be a long continued low range of prices, we repeat that the ultimate result is likely to be a demand in new directions, with a tendency to advance prices of the raw material.

### THE CONDITION OF THE TRADE.

AS having a bearing upon the business situation, it may be mentioned that the exports of crude rubber from Para during 1907 were largely in excess of those for any previous year, and 71 per cent. larger than for 1898. Whether the production of standard grades of rubber from the rest of the world has increased proportionately is doubtful, but there has been an increase. But visible supplies of rubber are not much greater now than ten years ago, which points to a great increase in consumption.

The above figures relate only to grades that have been standard all the while. Meantime there has been a marked increase in the production of pontianak gum, of Mexican guayule, and latterly of plantation rubber, the total of which sorts is very large. Similarly there has been a very great increase, proportionately, in the output of reclaimed rubber, which is now produced of better quality, and has become available for many purposes in the industry in which formerly its use was unknown. That the world should now demand so much more rubber than ten years ago is a most encouraging fact for the trade.

It has been observed that when the use of rubber becomes general for any particular purpose people are not apt to give up that use readily. Whoever becomes accustomed to wearing rubber overshoes continues the habit; the railroads which have adopted airbrakes must continue to buy hose for them; and the number of cities and towns having fire departments adds continually to the general demand for fire hose. No matter what the general business situation, therefore, the demand for rubber goods continues, though it may now and then be less active.

Such considerations as the above help to explain the generally optimistic views held in the rubber trade. The manufacture and sale of goods may be less active now than for some time past, but those large buyers who refrain from placing orders now, for any reason, must place them some time, so that in the end the average rate of consumption will be maintained. It has been said before, of business depressions in America, that the rubber

industry is one of the last to be affected, and among the first to revive, and there is nothing apparent at the present to suggest an exception to this rule.

#### FIGHTING FIRES IN "SKYSCRAPERS."

THE progress which new America has made in so many lines, as compared with some older countries, is due to the feeling which permeates the whole population that whatever seems desirable can be done, or obtained; it is only a question of going to work and bringing it about, without any regard to precedent. For example, the tall office building, first developed in this country in cities where certain conditions seemed to demand this form of construction, has been put up in the face of every objection it was possible to urge. Not the least of these was that no known system of protection against fire could be applied successfully to twenty-story buildings. "Then we must have new fire-fighting methods" was the concrete expression of American spirit, and every year produces taller buildings than ever before.

Whether progress in fire protection methods has kept pace with the new architectural conditions remains to be proved, but important evidence is likely to be brought out soon in New York, where a new high pressure system, involving the use of standpipes within buildings and powerful stationary engines, has been designed to supplant the portable steam fire engines now so familiar on the streets of every city. These have been described recently as "go carts," and this is what they seem when trying to squirt their feeble little streams of water toward a fire which may be raging a hundred feet or more above their highest limit.

Not all buildings are "skyscrapers" as yet, and the ordinary fire engine—if supplied with good hose—has a long career of usefulness before it. But the new system will call for a new class of rubber equipment, and it will be interesting to watch the progress of hose manufacturers in meeting the requirements of the situation.

#### CHEAPER "CHEWING RUBBER."

ONE of our esteemed contemporaries across the briny deep has an exceedingly interesting article on "chewing rubber," the "chewing" being an adjective. After explaining that it is very largely used in the United States and to some extent in England, they say that it is an excellent substitute for tobacco, cleans the teeth, and cleanses the breath. It tells how it is made:

"Raw rubber of the best quality; sweet woods in the finest sawdust for lasting purposes; liquorice: an essential oil, depending on the flavor desired; and lastly, a filling to cheapen the article, and consisting mostly of potato meal, or in some cases of magnesia."

The article goes on to say that attempts have been made to use vulcanized instead of raw rubber, but the product is deficient in aroma and has a taste that requires getting used to. At the same time such gum lasts a long time and is gradually getting into favor for that reason only. This information, particularly, will be of intense interest to rubber reclaimers. Chiclé

and sawdust are doomed. The next generation are sure to chew regenerated shoes, mats, and hose, "doped" with potato meal and flavored to taste.

#### LEST WE FORGET.

BUT a few moons ago Pará rubber was so high that the trade did not know which way to turn. The reclaimers and those who produce "assistants" did their best, but with little effect upon the general situation. Just then, however, some enterprising souls put millions of dollars into plants and processes for the extraction of rubber from a hitherto useless desert shrub. They produced on a magnificent scale and the hearts of the manufacturers were gladdened. They got a new and useful rubber and an assured and regular supply. Then came a change. Pará dropped in price, and—so it is said—they forgot their shrub rubber friend, and would have none of it. Yet it is here to stay. To take it out of the market would be calamity. To use it, and to encourage its production against the day when other grades reach their normal level would seem to be good business.

THE RUBBER OUTPUT FROM THE CONGO FREE STATE appears now to have reached about a fixed annual total, the amount for eight years past having not varied widely one year with another. The trade will welcome every feature of the rubber supply that points to stability of demand, as having a bearing upon stable prices. At the same time it is possible that the conditions in the Congo are such as to point to ultimate extinction of the supply, the present output being maintained by the working of new territory every year. A question of more immediate importance to the trade is the keeping up of the quality of the output, about which of late there has been a good deal of complaint.

#### ELECTRICITY IN MEXICO.

THE electrical development of Mexico is attracting wide attention. The *Electrical World* notes that the Mexican Light and Power Co., a Canadian concern alone have invested more than \$40,000,000 (gold) in the installation of electrical plants at Necaxa and elsewhere in Mexico, for lighting and transmission of power for street railways and industrial purposes. The Necaxa plant is of such importance that the German government has sent a commission of experts to study it. The Juanaquato Light and Power Co. have equipped a large plant at El Dura for supplying light and energy for motors to the neighboring mines. The Compañía Eléctrica é Irrigadora are developing a plant in Hidalgo state, to cost \$3,250,000. Tenders have been invited for a plant at Tetepango, to cost \$2,500,000. These are only a few of the new electrical enterprises listed by the *Electrical World*, the operation of which is, or is to be, spread practically all over Mexico, involving no small demand for insulated wires and cables.

#### EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of india-rubber and gutta-percha from the United States for the month of November, 1907, and for the first eleven months of five calendar years:

MONTHS.	Belting Packing and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
November, 1907 .....	\$125,812	\$130,705	\$298,535	\$555,052
Jan. to Oct. 1.....	168,648	1,401,890	3,345,209	5,915,747
Total .....	\$1,204,460	\$1,532,595	\$3,643,744	\$6,470,799
Total, 1906.....	1,083,228	1,137,445	2,993,804	5,214,477
Total, 1905.....	1,066,804	1,182,784	2,622,162	4,871,750
Total, 1904.....	808,771	1,099,030	2,149,273	4,057,074
Total, 1903.....	777,361	890,835	2,276,179	3,944,375



## THE EDITOR'S BOOK TABLE.

RECOLLECTIONS OF AN ILL-FATED EXPEDITION TO THE HEADWATERS OF THE Madeira River in Brazil. By Neville B. Craig, in Cooperation with members of the Madeira and Mamoré Association. Philadelphia and London: J. B. Lippincott Co. 1907. [Cloth. 8vo. Pp. 479 + maps and plates. Price, \$4.]

IT is conceded generally that the richest natural supplies of rubber on the globe are to be found in the South American republic of Bolivia, the product of which to-day ranks highest among the grades marketed as "Pará" rubber. Bolivia, though larger than any country in Europe except Russia, has no seaport and no natural outlet to any sea other than the river Madeira, obstructed by a formidable series of cataracts. The natural resources of South America, on the whole, doubtless are equal to those of North America, and of the southern countries none is richer than Bolivia. In mineral resources none other of the southern republics is so rich. But on account of the landlocked condition of the country it is hardly less remote from the world's commercial capitals than is the planet of Mars.

The possibilities of the commercial development of Bolivia by means of circumventing the cataracts of the Madeira were recognized long ago by Colonel George Earl Church, an American, than whom probably no one has or ever has had a more intimate knowledge of the geography and economic resources of South America. More than a century ago the commercial advantages to a large section from the opening of navigation down the Madeira via the Amazon to the Atlantic had been pointed out, but progress was made slowly in South America in those days, and it remained for Colonel Church to make the first definite attempt to carry out such an attempt, which was begun in 1870, when the National Bolivian Navigation Co. was organized under an act of the United States congress, with Colonel Church as president.

This company was formed to acquire a concession granted by the Bolivian government to Colonel Church to construct a railway around the cataracts of the Madeira. Financial obstacles were the first to be met, and the book before us records the attempts to secure additional capital in England, the prolonged litigation which grew up there in consequence and the ultimate failure of the whole project. But the book gives first place to the personal experiences of the engineers and others who departed from the United States in all good faith to undertake the construction of the Madeira railway, on which not a little work was actually done before the financial crash which gave a finale to the undertaking.

The present book is written by one of the survivors of the Madeira expedition, with the assistance of those of his colleagues who also survive, as an outgrowth of annual reunions which they hold in Philadelphia. It ends with a reference to a revival to Colonel Church's project, in pursuance of the treaty whereby Brazil succeeded in having rescinded the concession granted by Bolivia to Sir Martin Conway and his associates, with the details of which INDIA RUBBER WORLD readers are familiar. If the terms of this treaty are carried out, the rich rubber regions of Bolivia will be brought two months nearer to New York, and the domain of such "rubber kings" as Nicolas Suarez, on the upper Madeira, who was sketched by Mr. Post in THE INDIA RUBBER WORLD [April 1, 1905—page 223], need no longer be regarded as an unknown country to the world at large.

The interest of this book, other than to those who are concerned about the commercial possibilities involved in the opening of Bolivia to communication with the outside world, lies in its graphic descriptions of the rubber region tapped by the Madeira, and the native population, together with the hardships which white men must undergo in seeking to engage in trade there. These hardships enable us to understand the failures of so many companies largely capitalized in England to exploit rubber in the Amazon country. The

record of engineers crazed by tropical fevers and by starvation no doubt is being repeated in the history of the force now engaged, under an American contractor, in carrying out the new Madeira-Mamoré railway project. But when all is finished, as it inevitably will be, it will prove the first step in making Bolivia and the adjacent Brazilian states as habitable for white men as the Mississippi valley is to-day, after centuries of determined effort.

Although this book is put forth as a mere collection of memoranda, with no claim to literary merit, we recall no book relating to the country described that is more readable or more informing.

THE LAND OF TO-MORROW. A NEWSPAPER EXPLORATION UP the Amazon and over the Andes to the California of South America. By J. Orton Kerbey. New York: W. F. Brainerd. 1906. [Cloth. 12mo. Pp. ix + 405. Price, \$1.50.]

MAJOR KERBEY, some time United States consul at Pará, became interested in the sources of rubber, as his frequent contributions at a later period to THE INDIA RUBBER WORLD indicate. It was this that led him to go up the Amazon to its sources and thence to the Pacific. The present volume is a collection of newspaper letters written on a tour undertaken at his own initiative and expense, and this is not intended primarily to interest rubber men.

Major Kerbey, however, is an entertaining writer, being first of all a close and careful observer and one who never loses his interest in rubber, so that his book on nearly every page throws sidelights upon the people of the rubber regions and the conditions of conducting the rubber traffic which one is not likely to find in books written by professional tourists. The volume contains interesting notes on Pará and Manaus and the lesser known centers of the rubber trade in Peru. The title of the book is suggested by the disposition of the people described never to do to-day what can be put off until to-morrow—a disposition which accounts for their lack of what in other countries is called "progress."

THE CEYLON HANDBOOK AND DIRECTORY AND COMPENDIUM of Useful Information for 1907-08. To Which is Prefixed a Statistical Summary for the Colony and Review of the Planting Enterprise, up to August, 1907. Compiled and Edited by the Staff of the Ceylon Observer, under the Direction of J. Ferguson, C. M. C. Colombo: A. M. & J. Ferguson. 1907. [Cloth. 8vo. Pp. xli + 1456. Price, £1.]

This yearly publication, established in 1863, has grown steadily in extent and completeness until the present volume forms perhaps the best work of its kind ever produced in any country. There is scarcely any head under which information might be derived concerning Ceylon which is not covered in the volume under review. The editor regards the rubber planting industry as the most interesting branch dealt with in the returns in the present volume, the information given relating to every estate in Ceylon on which rubber has been planted. There is a complete directory of planting companies, extent of planting, names and addresses of planters and much other data of interest. This year, for the first time, the Handbook includes also information regarding rubber estates in Malaya.

KOLONIAL HANDELS-ADRESSBUCH. 1908 (12 JAHRGANG). MIT der Karte der Kolonien. Berlin: Kolonial-Wirtschaftlichen Komitee. 1908. [Paper. Large 8vo. Pp. 299. Price, 2.50 marks.]

AN admirable yearly work of reference for whoever is interested in trade in the German colonies from any point of view. The work likewise contains a directory of companies having headquarters in Germany and engaged in trade in other countries than the German colonies—in China, Abyssinia, all over South America, Central America, Palestine, and so on.

## IN CURRENT PERIODICALS.

ARBRE à Caoutchouc dit "Nong-giot," dans le cercle de Cao-Bang (Tonkin). Une Nouvelle Liane à Caoutchouc du genre *Boussignonia*. By Ph. Eberhart. — *Bulletin Economique*, Hanoi. X-66 (Aug. '06). Pp. 703-708. Anpassungsversuche an Kautschukbäumen im Nördlichen Küstengebiet Kameruns. [Results of tapping *Ficus Kichria* and *Hevea*.] By Professor A. Weberbauer. — *Der Tropenpflanzer*, Berlin. XI-12 (Dec. '07). Pp. 823-842. Neue Manihot-Arten und ihre Bedeutung. [Newly described species of "manicoba" rubber trees.] — *Der Tropenpflanzer*, Berlin. XI-12 (Dec. '07). Pp. 861-869.

## The Quality of New York City's Fire Hose.

THE extent of the supplies of fire hose at the command of the New York city fire department, and the condition of the hose, have received no little attention of late from the New York Board of Fire Underwriters, which has communicated on the subject with the city authorities. The underwriters do not hesitate to assert that the supply is deficient and the quality of much of the hose very poor, and some remedial action by the city is demanded.

A special investigation, extending to the hose in every engine house in the city and the fire department repair shop, was made by the engineers of the National Board of Fire Underwriters, the results of which are detailed in a report signed by Henry W. Eaton, chairman of the committee on water supply and fire department of the New York board of underwriters, with accompanying papers, which have been placed before Francis J. Lantry, commissioner of the fire department, with the request that they be transmitted to the mayor.

### THE SHORTAGE OF HOSE.

At the end of November, 1907, according to the reports under review, many of the companies were equipped with an insufficient amount of hose. The deficit in the boroughs of Manhattan and the Bronx was estimated at 40,150 feet—548 lengths of 2½ inch, 192 of 3 inch, and 63 of 3½ inch hose—which amount was likely to be increased before new supplies could be obtained. To supply this deficiency, however, 35,000 feet of 2½ inch hose had been ordered, for delivery in February, to be distributed over the five boroughs of the city. No other sizes had been ordered, except for the fire boats. The new hose is to be paid for out of the city's 1908 appropriation. No hose was paid for out of the 1907 appropriation, though some hose was delivered to the city during the last year which was ordered before the beginning of the year and paid for out of the 1906 appropriation.

### POOR QUALITY ALLEGED.

The remarks on the condition of the hose are prefaced by the remark:

"Testing of the hose under pressure [by the underwriters' engineers] was not permitted, as the department officials were apprehensive lest a large amount would burst when subjected to a suitable testing pressure, nor has the department made its regular yearly test (at 180 pounds pressure) for the past two years for the same reason."

It is stated in the report that hose for the New York fire department is purchased by competitive bidding from the different manufacturers, the successful bidders being required to give bonds to fulfill certain guarantees. Specifications for the purchase of fire hose were first adopted in 1902, and previous to 1905 they agreed closely with the makers' standard practice. In 1905 new specifications were adopted by the fire department, containing many variations from those previously in use, and various changes have been made since that time, so that the present specifications differ materially from the standard practice of the manufacturers; indeed to such an extent that while the department's specifications call for a lining of a superior quality of rubber, the hose is not so durable as that regularly made by some manufacturers.

The result of this situation, the report says, is that the few manufacturers who tender for fire hose for New York under present conditions give the three year guarantee required unwillingly, although they stand ready to guarantee their regular brands made under their own specifications for five years. New York specifications for rubber hose are worded in a general manner, those for cotton rubber lined hose are so worded as to allow only certain manufacturers to bid on a given specification.

It is asserted that hose of all kinds purchased under the later specifications is giving unsatisfactory service, much of it bursting before the three year guarantee expires, and at a much lower pressure than is guaranteed by the maker. Of 1,837 lengths of 2½ inch on hand January 1, 1907, purchased in 1904, 1905, and 1906, 351 lengths, or 19 per cent., burst during 1907, while of 1,597 lengths purchased between 1893 and 1902, only 281 lengths, or 17½ per cent., burst, although the latter was older hose and had already done hard service.

In 40 large fires in the boroughs of Manhattan and the Bronx, from January to November inclusive, 1907, no less than 460 lengths of hose, or 23,000 feet, burst and were rendered useless. At 22 of these fires hose was burst in excess of 10 lengths each. "More important still," says the report, "is the fact that in quite a large number of cases hose burst at a pressure of not exceeding 200 pounds, and even in some instances at as low a pressure as 60 pounds!"

Reference is made to the fact that 75,300 feet of hose owned by the New York department has been in use for over seven years, and, while this fact in itself is not a condemnation, the engineers cannot feel but that great risk is run by the city in continuing to use hose which in the nature of things is subject to deterioration from age and use. It is recommended that all such hose ought to be put to suitable test without delay.

### THE UNDERWRITERS' SUGGESTIONS.

Based upon the facts elicited by the investigation referred to in these reports, certain recommendations have emanated from the office of the National Board of Fire Underwriters, which are printed here in full as follows:

#### NATIONAL BOARD OF FIRE UNDERWRITERS.

NEW YORK, December 20, 1907.

GEORGE W. HOYT, Esq., Chairman Committee on Fire Prevention New York City:

DEAR SIR: In conformity with a resolution adopted at the meeting of the committee on fire prevention, held on the 19th instant, a number of recommendations are submitted herewith supplemental to report on the condition of hose in the New York fire department.

This, you will recall, is done at the special request of Mr. George W. Babb, as president of the New York Board of Fire Underwriters, in order that the subject of bringing about improvements may be brought to the attention of the proper city authorities.

These recommendations apply to conditions in the boroughs of Manhattan and the Bronx only, and are as follows:

1. That the department purchase (in addition to amount recently ordered) 20,000 feet of 2½-inch, 20,000 feet of 3-inch and 5,000 feet of 3½-inch hose, to be distributed in Manhattan, especially below Fifty-ninth street; this hose to be delivered at the earliest possible date.
2. That this hose be purchased under a 300-pound, four year guarantee, with specifications worded in a general way so as to permit makers of either rubber hose or cotton, rubber lined hose to bid.
3. That rubber lining be of not less than 3 calenders and not less than 1-16 inch thick, no maximum limits being set.
4. That every section purchased be subjected to a pressure of 200 pounds per square inch at the factory, in the presence of a representative of the New York fire department.
5. That on delivery one length in each lot of 5, taken at random, be subjected to the guaranteed pressure of 300 pounds, any failure to be cause of rejecting entire lot of five lengths.
6. That the stretching test for rubber lining be from 2 inches to 10 inches (instead of 12 inches), with a permanent set of ½ inch.

7. That specifications for weight and strength of cotton duck and for yarn used in cotton covers be abolished, as this is covered by the four-year guarantee.

8. That no bid be considered unless from a manufacturer or of dealer in fire hose.

9. That in cases where agents (not direct representatives of hose manufacturers) file a bid they must specify the brand of hose to be supplied and the bid must be accompanied by the manufacturer's guarantee.

10. That any bid may be rejected in whole or in part.

11. That upon a delivery of the above mentioned hose the department shall test all hose on hand, over one year old, to a pressure of 200 pounds per square inch, until all has been tested or until an amount equal to that delivered has been burst; in which case the department shall purchase as speedily as possible a further lot of hose to replace that burst and upon its delivery continue the testing until hose has been tested throughout the boroughs of Manhattan and the Bronx.

12. That prompt measures be taken to enforce the fulfillment of the guarantees on hose purchased during the last three years; this applies especially to the —, —, and — brands.\*

13. That bids be immediately advertised for at least eight hose wagons as designed by the fire department, to be used in connection with the high pressure fire service.

14. That a supply of three-inch hose be purchased, about 30,000 feet, to equip the high pressure hose wagons. This hose should be purchased under similar liberal specifications as the other department hose, but should be guaranteed to stand 400 pounds pressure, every length should be tested to 300 pounds, and every fifth length to 400 pounds. This also should be delivered as early as possible. Respectfully submitted,

W. E. MALLILIEU,  
Assistant to General Agent.

John H. O'Brien, formerly fire commissioner of New York for a short period and now holding another position in the city government, has issued a statement bearing upon the system of new and larger water mains ordered at a heavy cost and now nearing completion, in which connection he says: "Unless the fire department is equipped with hose capable of standing hydrant pressure of 300 pounds, efficiency of the high pressure system probably will be nullified. The city ought to vote \$500,000 for hose to insure the success of the new fire protection service, which is costing \$3,500,000."

#### BURNING OF THE PARKER BUILDING.

The importance of the fire hose question has been emphasized, since the appearance of the reports just referred to, by the burning of the twelve story Parker building, at Fourth avenue and Nineteenth street, New York, on the night of January 10. Although the fire engines were promptly on the scene and the firemen exerted themselves to the utmost, the building was left a ruin and the contents totally destroyed. The amount of the loss is as yet unknown, but the insurance reported on the building and by fourteen tenants amounted to more than \$2,000,000. The fire commissioner complained strongly of the bad condition of the hose in use, but from a study of the newspaper reports it would appear that a lack of pressure which prevented streams of water from being thrown above the sixth story of the building had more to do with the failure of the firemen to subdue the flames. The fire, it may be added, broke out on the fifth or sixth story and ascended to the roof, after which its work was continued until everything was destroyed down to the cellar. Doubtless it will be found that a change of existing methods for fire protection in the case of very tall buildings will be found equally important with the improvement of the present standard of quality of fire hose and increase of water pressure in the districts in

which the high buildings abound. It may be added that the firemen prevented a spread of the flames to any of the adjoining buildings, but these were all low in comparison with the Parker building and capable of being covered by streams thrown by the fire engines under the low pressure obtainable in that part of the city.

It is definitely stated that at this fire 25 fire engines were in action, supplied with 585 lengths of hose, of which 41 lengths—or nearly 7 per cent.—burst.

#### NEW YORK MERCHANTS TAKE ACTION.

Following the action of the fire underwriters, and influenced to an extent by that action and also by the revelations in relation to hose brought out by the Parker building fire, on January 10, the Merchants' Association of New York has made a formal demand upon Mayor McClellan for a further investigation. The letter of the Merchants' Association calls for an examination of "all the circumstances attending the recent changes of specifications for hose, the effect of such changes upon competition by leading manufacturers, the conditions attending the letting of contracts made since the change of specifications, the business connections and standing of the contractors, the quality of the hose delivered, and the steps taken by the fire department to enforce the hose guarantee intended for the city's protection."

#### THE OLD SCANNELL SCANDAL.

In the New York courts on June 28, 1901, John J. Scannell, then fire commissioner, was indicted on charges affecting the methods of purchasing fire hose for the city, and further on a charge of conspiracy, with one William L. Marks, described as "agent," for conspiring to defraud the city in purchasing fire hose. [See THE INDIA RUBBER WORLD, August 1, 1901—page 336.] It was asserted at the time that no fire hose could be sold to the city except through this "agent," and the inference was that a commission had to be paid to him which he in turn divided with the authorities. While much was printed in the newspapers in regard to the matter at the time, the consideration of the case in the courts was repeatedly postponed, and although a second indictment was obtained by the district attorney, the accused were never brought to trial, and the merits of the case, if there were any, never became public. Since the time referred to the matter of the purchase of fire hose has not been until now a matter of general interest.

Public sentiment was not aroused by the Scannell case, because no question was raised then with regard to the quality of the hose supplied. Now, however, a different feeling prevails, which is reflected in an editorial in the New York Sun (among other newspapers), in which it is asserted: "The water pressure in the mains was inadequate and the fire hose was rotten. In our opinion the individuals who sold the hose and the officials who bought it should be dealt with by the grand jury and, their culpability being ascertained, indicted for manslaughter."

#### GUAYULE NOTES.

A CONTRACT has been entered into by the Mexican minister of Fomento with Fernando Solis Camara and Ricardo Arteaga for the exploitation for ten years of any guayule plants on national lands in the states of Durango and Zacatecas. The *cessionnaires* are bound not to cut shrubs under a certain size, and are to plant new shrubs to replace those cut down. They are to deposit a fund to guarantee the fulfillment of this contract, and pay \$100 a month for a government inspector. The contract was published in the Mexican *Diario Oficial* of November 1.

Experiments in the culture of the guayule rubber plant have been begun on the hacienda "Cedros," in Chihuahua, recently bought by the Continental Rubber Co. The work is in charge of Professor F. E. Lloyd, formerly of Columbia University and interested latterly in desert botanical work in Arizona.

\*THE INDIA RUBBER WORLD, in dealing with the fire hose situation in its present shape, does not feel called upon to introduce the names of any manufacturers or their brands of hose.—THE EDITOR.



## The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

THE perennial interest attaching to this topic makes unnecessary any apology for further reference to it. Recently in *Chemical News* Messrs. Beadle and Stevens have given the results of further experiments made in the laboratory but approximating closely, in their opinion, to actual working conditions. The conclusions they arrive at are in favor of the Ceylon and Straits product as compared with fine Pará rubber from Brazil. This will no doubt prove eminently palatable to the planter, but this expression of opinion will have no commercial significance until the conversion of the manufacturers has been effected. So far I am unable to record any progress in this direction. Of course I don't profess to have canvassed the whole trade, but from inquiries among those who have tried the plantation product for widely different purposes I find a remarkable unanimity of opinion as to the deficiency of nerve in the Eastern as against the Brazilian product. It might perhaps be thought that this defect was really only of importance in a few branches, such as cut sheet, for example, but this is by no means the case. One of the strongest denunciations I have heard emanated from the director of an important proofing works in which I am told that plantation rubber, after having had an extended trial, had been altogether banished, for the present at all events. Although rubber is not supposed to figure largely in a proofing compound, it is important that what is there should have a good covering power. This is the property *par excellence* of fine Pará, and for this reason it can be shown that the use of the best rubber is really quite as economical as a mixture of second quality brands for waterproofing purposes—on cost of production alone and quite independent of wearing or lasting properties. As it is not customary in British rubber factories to make accurate determinations of tensile strength, such as carried out by the authors mentioned above, it is unlikely that refutation will come from the trade. It is still less likely that the manufacturers will throw over the fruit of their own experience merely because they are told that they are wrong in their conclusions.

THE new year does not seem to have opened very auspiciously for the rubber scrap collector and dealer. There is a general complaint of the fall in prices and accumulation of stocks and the prevailing tone is one of pessimism rather than optimism. It is hardly necessary to point out that there is much more systematic collection of scrap rubber going on at present than was the case only a few years ago, and that the prices of old rubber articles have advanced as the result of competition among the increased body of collectors. In the case of embedded wire hose, of which large stocks are held in some quarters, it seems somewhat strange that the price has not fallen, seeing that it continues to be barred by the majority of the reclaimers. Apropos of this topic a friend who holds a high scientific position quite unconnected with rubber tells me that he thinks he was the first to make a reclaimed rubber from railway hose, some 25 or 30 years ago. The hose was dissected by army pensioners and the wire sold at Sheffield. The canvas was rotted out with hydrochloric acid, the sediment produced being sold to the Lincrusta Walton company at a price sufficient to pay all working expenses. The rubber was then sheeted with the help of unvulcanized waste from card clothing and sold at 1 shilling 6 pence per pound. I doubt if any market could be found nowadays for the rotted canvas deposit and I should say that if much pure card cloth rubber was procurable in these days of glue substitutes it could be sold to better advantage by itself than as a component of recovered vulcanized scrap.

### STRENGTH OF PLANTATION PARA RUBBER.

Rubber goods of various kinds are in regular use at Aldershot, especially in the army service corps and royal engineers. Rubber hose pipes are prominent articles and these together with tires and other goods are collected from the various departments and sent to the ordnance stores, whence they are sold periodically by tender on certain dates.

With regard to the present slump in prices of rubber scrap, though it is no doubt due chiefly to the lower price of raw rubber yet in some quarters I find that the plantation rubber is held largely responsible.

Old or used motor and cycle tires come to London from all over England, some of the former being rejuvenated for sale as second hand tires, and others, perhaps the bulk, going to the scrap and reclaiming works. Business is done in large and in quite small lots, old tires being forwarded as freight and cash at current values sent in two days.

I UNDERSTAND that a patent valve emanating from the management of this company is shortly to be put upon the market both in England and America by the Anchor Bush Co., which is concerned with engineering matters. The valve, which is of course made of Dermatine, has metal let into it in such way as to prevent wearing at important points and thus prolonging its life. The patent should interest steam users generally, as in many cases, notably in the marine work, Dermatine valves have of late made great strides, the employment of this material for jointing purposes in the steamer *Lusitania* being a case in point.

Mr. J. F. Cooper (a son of the late Mr. John Cooper, who was for many years general manager of the Dermatine company) is not now connected in any way with the firm, having joined the Motor and General Rubber Co., Limited, of Euston road and Harpenden.

Two prosecutions under this act have to be recorded, both in connection with tires and in both of which, curiously enough, the Dunlop tire company figured. In the first and most important case, heard in London, the Polack Tyre Co. company complained that the Dunlop company bought some Polack tires, removed the letters and marks indicating their German origin, and supplied them to a London motor omnibus company with nothing to intimate that they were not made in Birmingham. The complainants had the magistrate's decision in their favor, but as the Dunlop company have appealed, the case must still be considered *sub judice*. It may be permissible, however, to say that the case has proved a good advertisement for the Polack tires. In the second case the Dunlop company were the complainants and on the ground that Mr. Walter Cheetham, of Hyde, a rubber tire dealer and manufacturer, had sold some tires as being made by the Doughty patent process. It was stated at the local police court that the Doughty patent was of great value to the Dunlop company, a statement which other British manufacturers recognize as far at least as rapidity of output is concerned. The defendant was fined £10 and costs, though it should be said that the offense was attributed to a workman who had acted contrary to instructions in the defendant's absence.

EVERY now and then I make reference to rubber goods which are sold to order for special purposes and do not find a place on ordinary trade lists. One such article which has not had previous reference is the rubber cap for large glass jars in connection with certain analytical work. These were first made, I believe, by Charles Macintosh & Co. about 30 years ago

### DERMATINE CO., LIMITED.

### MERCHANDISE MARKS ACT.

### RUBBER CAPS FOR GLASS JARS.

for Dr. Angus Smith, a noted chemist and chief inspector under the Alkali acts. They are 6 or 7 inches in diameter and made of pure spread vulcanized sheet with a deep flange so as to make the jar air tight when in use. Of late years, as made by different firms to the order of individual chemists, they have shown considerable variation in neatness of appearance, principally in the jointing. In the case of some which I examined recently the rubber was quite decayed, to the annoyance of the chemist, but as he had carried out his own desulphurizing in caustic soda I was in no hurry to talk about bad work or the use of inferior rubber by the manufacturer.

ALTHOUGH so far rubber tires have not had any extended use on vehicles under the control of the War Office, the possibilities attaching to them are receiving close attention. The branch of

**RUBBER TIRES  
IN THE  
BRITISH ARMY.**

the service which is concerned with the matter is that of mechanical transport, under a special committee at the War Office. It is a special branch of the army service corps and at Aldershot there are experimental and repairing shops under the charge of engineers who have the honorary rank of officers in the army service corps. It is the business of these officers to investigate the latest types of mechanical transport, including motor wagons and traction engines. Considerable progress has been made in some directions in substituting mechanical for horse transport, a case in point being the hauling of siege artillery. At present the use of rubber tires is limited practically to ambulances and light motor wagons carrying about 30 hundred-weight, though it may be added that the officers in charge of the department have motor cars provided with their use. The pneumatic tires used on these are under close supervision and every puncture has to be carefully recorded. I hardly feel myself at liberty to use here the details of the information in my possession, especially as there is a formidable document entitled the "Official Secrets Act" to be met with at various points in Aldershot, but there can be no harm in saying that I have heard the Dunlop, Sirdar, and Palmer Cord tires highly spoken of. The Palmer tire was referred to in special terms of praise by an officer who had them on a private car with which he made some long non-stop runs when attending the Scottish Reliability trials. Repairs to tires are carried out at the mechanical transport shops, a Harvey Frost apparatus being installed.

### RUBBER INTERESTS IN ENGLAND.

#### DUNLOP TIRE PROFITS.

THE net trading profit of the Dunlop Pneumatic Tyre Co., Limited, for the year ended September 30, 1907, before deducting directors' fees, debenture interest, etc., amounted to £29,950, but the profit realized from investments was £191,777, making a total, after the deductions noted, of £200,478 5s. 7d. [= \$975,625.57]. The income from investments includes dividends from the Dunlop Rubber Co., Limited [see THE INDIA RUBBER WORLD, January 1, 1908—page 110]. The dividends for the year of the Dunlop Pneumatic Tyre Co. amount to 5 per cent. on the preferred shares, 8 per cent. on the ordinary shares, and 7½ per cent. on the deferred shares, totalling £137,246 7s. 9d. [= \$667,909.58]. The company write off £60,000 from their good will account and carry forward £19,271, against £16,039 last year. While the Dunlop profits have been large, it will be recognized from the above that the dividends distributed to the shareholders of the Pneumatic Tyre company have already been counted once, in part, in the report of the Rubber company.

#### PROFITS OF THE SILVERTOWN COMPANY.

THE accounts of the India Rubber, Gutta Percha, and Telegraph Works Co., Limited, for the year ended September 30, 1907, showed net profits of £56,809 14s. [= \$276,465.97]. The general business of the company showed an increase over that of the year before, and their works in England and France and

their cable steamers were all well employed. A good business had been done in tires. The dividends declared for the year amounted to 10 per cent., the same as for last year.

#### PALMER TYRE, LIMITED.

THE accounts for the year ended September 30, 1907, showed a profit of £7684 [= \$37,394.19], and the dividend amounted to 5 per cent. The company is owned by the India Rubber, Gutta Percha, and Telegraph Works Co., Limited, who, it is understood, will put more capital into the business. The company's product is the well known Palmer Cord tire.

#### POOR RESULTS OF PEGAMOID.

NEW Pegamoid, Limited, for their fifth year, ending September 30, 1907, report such poor results that no dividend was declared. The net return for the year was £233. The dividend was 8 per cent. for the first two years. The company succeeded in the English corporation known as Pegamoid, Limited, floated in 1896 with £300,000 [= \$1,459,950] capital.

#### GREAT BRITAIN.

THE annual meeting of the Liverpool Electric Cable Co., Limited, was held on December 20. The dividend declared for the year was 7½ per cent., the same as last year. This company is an outgrowth from the Liverpool Rubber Co., Limited, with which it is affiliated.

The Dunlop Rubber Co., Limited (Birmingham), have taken on the manufacture of golf balls, producing an article with which some notable records have been broken.

The directors of the Amazon Steam Navigation Co., Limited, declared an *interim* dividend of 2 per cent. on account of the last business year, payable on and after January 2. The full dividend for the year for some time past has been 4 per cent.

Rubber Novelties Co., Limited, to manufacture rubber goods; registered in London, October 14, 1907; capital, £700. Directors: T. Mason (managing director), V. R. Milner, and W. Davies. Registered office: 75, Raval street, Salford, Manchester.

Boro Rubber Co., Limited, registered in London, December 6, 1907, with £5000 [= \$24,332.50] capital, to acquire the business carried on by A. Mallaby, at Bradford, as the Borough Rubber Co.

The new cable between New York and Havana, laid by the Commercial Cable Co. of Cuba, provides the most direct and speedy route between Great Britain and Cuba, there being only two intermediate points of transmission—Waterville, Ireland, and New York.

Joseph Fynney & Co. (india-rubber merchants and importers, 55 Brown's building, Liverpool) have issued their Diary for 1908, including a number of useful tables for ready reference, such as net cost of rubber after shrinkage in washing; price equivalents in cents and shillings per pound, francs per kilo, etc.; vulcanizing pressure and temperature table; and rubber statistics. It is, as usual, bound neatly in leather and is of convenient size.

MALACCA Rubber Plantations, Limited, in the Straits Settlements—mentioned several times in THE INDIA RUBBER WORLD on account of some Americans having been interested in its flotation—report that tapping proceeded during seven months, up to the end of October, 1906, when it was decided to wait until a larger number of trees had reached maturity. During that time some 30,000 *Hevea* trees yielded about 14,500 pounds of rubber and 5,000 *Ficus* trees 1,550 pounds.

THE Liberian Rubber Corporation, Limited, report that their trading for 1906 (their first year) was conducted at a net loss, in view of the cost of entering new fields, but they feel confident of better results for 1907. The company gathered during the year 116,025 pounds of rubber, besides handling 10,380 pounds for merchants—a total of 126,405 pounds.

## THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

PRACTICALLY everybody of prominence in the trade in Akron seems encouraged at prospects of an early improvement in business conditions. Orders are coming in at almost all of the factories with more dispatch, and employes who have been idle for the past few weeks are returning to their work. Mr. B. G. Work, president of The B. F. Goodrich Co., it is true, was a bit pessimistic when interviewed for THE INDIA RUBBER WORLD.

"Of course I'm hoping that things will brighten up," he said, "but I can't say that our company is experiencing any great prosperity right now. And I don't want to say that conditions will be better unless I know that I'm telling the truth."

Mr. A. H. Marks, vice president of The Diamond Rubber Co., reports a marked improvement in business since January 1. "We are putting men back at work every day," he said, "and it won't be long until we are working them all full time again. I have reason to be greatly encouraged at our prospects."

James A. Braden, of the same company, said: "We have had a good run on bicycle and automobile tires, as well as on mechanical goods since the first of the year. Most of our salesmen whom we called in before Christmas are now back on the road."

Mr. F. A. Seiberling, of The Goodyear Tire and Rubber Co., is not inclined to worry over the situation. "People are beginning to take their stock down off the shelves," he said, "and orders are coming in better every day. It looks as though that long expected let-up in the financial stringency has at last arrived."

Mr. B. C. Swinehart, vice president and sales manager of the Swinehart Clincher Tire and Rubber Co., says business was never before as good as it is now. "We never before sold as many truck tires as we have disposed of this winter," he said. "I attribute this condition in part to the advance in the prices of feed for horses. It creates a demand for automobiles, and a demand for automobiles means a demand for tires."

The Stein Double Cushion Tire Co. are not getting as much business as could be desired, yet their officers are decidedly optimistic. "The attitude of our buyers leads us to believe that conditions will improve rapidly in the near future," says M. M. Neuman, secretary of the concern.

AFTER a careful study of reports from all sections, Mr. W. B. Miller, sales manager and secretary of The Diamond Rubber Co., predicts a busy year for manufacturers of motor accessories. His investigation indicates that the amount of renewal business will be greater than ever before.

"The number of motor cars in use last year is not to be diminished," he figures. "If some owners do not see fit to use their machines the cars will pass into the hands of somebody who will. New cars, while not equal in number to last year's output, will reach in the aggregate a very large figure, making a lot of equipment necessary."

At the annual meeting of The B. F. Goodrich Co., on January 15, all of the old officers and directors were reelected: B. G. Work, president; F. H. Mason, first vice president; H. E. Raymond, second vice president and general sales manager; C. B. Raymond, secretary; W. A. Folger, treasurer; W. A. Means, assistant treasurer; E. C. Shaw, general manager of works; H. E. Joy, general superintendent. The directors are: Colonel George T. Perkins, F. H. Mason, B. G. Work, E. C. Shaw, H. E. Raymond, C. C. Goodrich and George W. Crouse.

The Aladdin Rubber Co., whose reclaiming plant at Barberton burned to the ground a short time ago, held their annual meeting last month. The directors elected were James Christy, Will Christy, Charles Heller, John H. Conner and Sidney E. Conner. Plans for the company's reorganization were discussed. The

rebuilt plant will soon be put into operation, with a capacity double that of the former plant.

Officers of the Whitman & Barnes Manufacturing Co., chosen at the annual meeting last month, are as follows: William H. Gifford, chairman; C. E. Sheldon, president; William Stone, vice president; William H. Eager, treasurer; Frank Hiscock, general counsel; George A. Barnes, general superintendent. The directors are George T. Perkins, C. E. Sheldon, C. I. Bruner, George C. Kohler, George A. Barnes, William H. Gifford, Frank Hiscock, William Stone and William W. Cox. The company gave up the manufacture of rubber goods some years ago, but the board still embraces some names identified with the rubber trade.

THE B. F. Goodrich Co. have established a branch house at 2, rue Brunel, Paris, and its opening has excited no little comment in France. For an American manufacturer to compete directly with France in making automobile tires has heretofore been regarded as almost foolhardy. Goodrich tires have been sold in Paris before now but never had a regular branch been established. Albert Augier, who has been associated for years with Henry Fournier, is in charge.

The office force of The B. F. Goodrich Co. at Akron are now occupying the spacious and beautiful new office structure. The building is four stories in height and constructed of stone and pressed brick. The correspondence department is in the basement, the officers of the company are on the first floor, the treasurer and his assistants on the second, the sales department on the third, and the advertising department on the fourth.

THE Mitzel Rubber Co., formerly located in Barberton but lately removed to Carrollton, Ohio, has filed a petition in bankruptcy in the United States district court at Cleveland. Assets are \$63,682.16 and liabilities \$76,130.40. The company not long ago went into the hands of receivers and by its latest action has simply transferred its litigation to the United States court. The plant is being kept in operation.

A suit has been filed in which the courts are asked to sell the property of the Superior Rubber and Manufacturing Co., at Cuyahoga Falls, Ohio, and divide the proceeds among the company's creditors. Calvin W. Vaughn is the petitioner.

For some time The Diamond Rubber Co. has been casting about for some means of offsetting the laws prohibiting tire chains. The latter have been placed under the ban in New York, many places in New Jersey and are about to be in Philadelphia. In their latest product the Diamond antiskid tire, officials of the company think that they have solved the problem. The tire has a flat tread, studded with rivets of case hardened steel. Every rivet comes into contact with the road surface, and every one contributes a force against slipping. Jointly they prevent skidding absolutely. They are so built into the tread that no leverage tending to pull them from their place is exerted, and the slight wear is so evenly distributed that they will last as long as the ordinary tire.

THE Firestone Tire and Rubber Co. have issued a "Chauffeur's Moral Code." It contains ten resolutions, recommended to operators of commercial motor vehicles for the treatment of their cars and tires, and is designed to assist car owners to lengthen the life of their tires. Some of the resolutions are: not to overload, to keep the brakes working evenly, to keep oil and grease from accumulating on the tires, not to expose tires to extreme heat, to start the vehicle in a straight line, to stop the car gradually, not to run along street car rails, to choose the smoothest pathways, and to attend to damaged tires promptly.

MR. B. C. SWINEHART, of the Swinehart Clincher Tire and Rubber Co., will reside in Chicago in 1908, making his headquarters at the company's Chicago branch.



日本電線株式會社<sup>(1)</sup>

三田土護謨製造合名會社<sup>(2)</sup>

日本護謨株式會社<sup>(3)</sup>

橫濱電線製造株式會社<sup>(4)</sup>

東京護謨株式會社<sup>(5)</sup>

明治護謨製造所<sup>(6)</sup>

東洋護謨株式會社<sup>(7)</sup>

木綿調帶合資會社<sup>(8)</sup>

東洋藤倉電線所<sup>(9)</sup>

上條商店<sup>(10)</sup>  
住友伸銅所<sup>(15)</sup>

藤倉電線護謨合名會社<sup>(11)</sup>

山田氣球製作所<sup>(12)</sup>

才一式調帶製造株式會社<sup>(13)</sup>

角市護謨製造所<sup>(14)</sup>

合資會社帝國護謨製造所<sup>(17)</sup>

帝國電線株式會社<sup>(16)</sup>

A LIST OF SEVENTEEN JAPANESE RUBBER FACTORIES.

[The numbers refer to the names in English on the opposite page.]

## The India-Rubber Industry in Japan.

By A Special Correspondent.

THE demand for manufactured rubber goods in Japan is yearly increasing, and it is safe to forecast a very much greater demand as time goes on. This demand is not, however, likely to result in any increased import of manufactured rubber goods; in fact the tendency is rather to a decrease. This of course has not yet made itself very apparent in the customs returns, as will be seen from the figures which follow:

RUBBER GOODS.	RAW RUBBER.
1903.....\$264,748	1903.....\$108,566
1904.....138,899	1904.....274,328
1905.....145,777	1905.....427,975
1906.....229,976	1906.....292,595

Nevertheless the imports of manufactures seem certain to decrease with the increasing number of rubber factories which have been established within the last few years, and which are now being erected. The old established factories also are increasing their output, and recently a large increase of capital was made by a majority of the rubber companies. The market for their product is confined almost entirely to Japan and China, and their competition must consequently affect the quantity of imports into Japan; however, it is at present a competition in price entirely, since the question of quality does not count for very much. The better quality of goods is still imported, and this doubtless accounts for the apparent increase in values in the customs returns, for we believe that the quantity of imports has actually decreased, and that this decrease in quantity is more than offset doubtless by the increased value of the imported goods which are now in demand.

The majority of the rubber factories in this country are located in Tokio and its neighborhood. Osaka, although it is the principal manufacturing city of Japan, appears to have been somewhat backward in the matter of rubber factories. It is soon, however, to obtain the premier position in this, as it has in the matter of most industries. A syndicate of French capitalists, in conjunction with the Dunlop tire manufacturers, have

planned a very large factory in this district, and it will doubtless be in operation within a year or a little more. Foreign engineers were lately here looking into the matter, and there is a feeling in some quarters that the opening of this plant will revolutionize the rubber industry in Japan, so far as the manufacture of mechanical rubber goods is concerned.

With regard to the manufacture of insulated wires and cables, Osaka is also about to take a long step in advance. The owner of one of the largest copper mines in the country now has in course of construction an insulated wire works, which will probably be the largest concern of its kind in the empire. As the owner of these works is in the foremost rank of Japanese capitalists, it is safe to predict a glowing future for the enterprise.

Owing to the increase in the number of factories, and the extension of the already existing plants, competition among the rubber goods dealers already is very keen and the prospects for the future that it will be still keener. It is hoped, however, that this competition will ultimately lead to an improvement in the quality of goods now manufactured in this country, and that it will not tend, as it unfortunately seems to be doing at present, to the cheapening of quality in general.

Whatever the result may be so far as the manufactured article is concerned, the imports of crude rubber and the allied materials are increasing by leaps and bounds every year. The government, although wedded to a protective tariff, appears to view this with favor, for among the articles which were put on the duty free list when the tariff was revised last were crude india-rubber and gutta-percha. This revised tariff came into effect October, 1906. Notwithstanding that rubber is duty free, the government is endeavoring to foster the growth of rubber plants in the empire, and to this end is now encouraging the cultivation of rubber trees in Formosa, and instructing the natives in the methods of gathering the gum. No practical effect from this experiment, however, can be expected for several years to come.

### LIST OF RUBBER FACTORIES IN JAPAN.

[THE name first printed in each case is the Japanese name expressed in Roman letters; the second is a translation of the firm name into English. The figures refer to the names of the companies in Japanese characters, on the opposite page, reading from top to bottom of the page, at the right.]

[1]  
NIHON DENSEN KABUSHIKI KAISHA.  
*Japan Insulated Wire Works.*

[9]  
TOYO FUJIKURA DENSEN JO.  
*Oriental Fujikura Wire Works.*

[10]  
KAMIJO SHOTEN.  
*Kamijo & Co.*

[2]  
MITATSUCHI GOMU SEIZO GOMEI KAISHA.  
*Mitatsuchi Rubber Manufacturing Co.*

[11]  
FUJIKURA DENSEN GOMU GOMEI KAISHA.  
*Fujikura Insulated Wire and Rubber Co.*

[3]  
NIHON GOMU KABUSHIKI KAISHA.  
*Japan Rubber Co., Limited.*

[12]  
YAMADA KIKYU SEISAKU JO.  
*Yamada Balloon Works.*

[4]  
YOKOHAMA DENSEN SEIZO KABUSHIKI KAISHA.  
*Yokohama Electric Wire Works, Limited.*

[13]  
OTASHIKI CHOTAI SEIZO KABUSHIKI KAISHA.  
*Otashiki Belt Manufacturing Co., Limited.*

[5]  
TOKIO GOMU KABUSHIKI KAISHA.  
*Tokio Rubber Co., Limited.*

[14]  
KAKUICHI GOMU SEIZO SHO.  
*Kakuichi Rubber Works.*

[6]  
MEIJI GOMU SEIZO SHO.  
*Meiji Rubber Works.*

[15]  
SUMITOMO SHINDO JO.  
*Sumitomo Wire Drawing Works.*

[7]  
TOYO GOMU KABUSHIKI KAISHA.  
*Oriental Rubber Co., Limited.*

[16]  
TEIKOKU DENSEN KABUSHIKI KAISHA.  
*Imperial Insulating Wire Co., Limited.*

[8]  
MOMEN CHOTAI GOSHI KAISHA.  
*Cotton Belt Co.*

[17]  
GOSHI KAISHA TEIKOKU GOMU SEIZO SHO.  
*Imperial Rubber Manufacturing Works.*

One of the principal manufactures in which rubber plays a part, to which the Japanese are devoting their energies, is the manufacture of insulated wires. The copper ore from which the wire core is drawn is plentiful in the country, and the demand for insulated wires for all manner of electrical purposes is here, as elsewhere, growing yearly. The imports of wire for electrical purposes, during the years 1904 to 1906, were as follows:

	1904.	1905.	1906.
Submarine and underground telegraphic wires or cables.....	\$518,480	\$1,284,587	\$103,820
Electric light wire.....	389,139	385,711	416,677
Total .....	\$907,619	\$1,670,298	\$520,497

It will be noticed in the above statistics that the value of submarine and underground telegraph lines and cables imported in 1905 is far in excess of the imports for either 1904 or 1906. This is to a great extent explained by the war requirements, which came forward in the fiscal year 1905. Ultimately Japan expects to supply her entire requirements in this respect, as in many others. As stated earlier in this article, a large plant for the construction of insulated wire is now being erected in Osaka. The following is a list of the principal rubber factories now in operation in Tokio and its vicinity:

	Capital.	Value Products.
Japan Rubber Co., Limited.....	\$90,000	\$125,000
Oriental Rubber Co., Limited.....	125,000	60,000

Mitsubishi Rubber Co.....	40,000	250,000
Fujikura Cable Works.....	50,000	400,000
Meiji Rubber Co.....	35,000	100,000
Yokohama Cable Works.....	600,000	\$500,000
a Estimated		

A fair idea of the raw material consumed by the above factories will be arrived at by taking half the value of their output. This will not give an entirely accurate idea, as in some cases the material consumed is proportionately more, and in others less valuable, but it will give an average idea of the yearly consumption of all raw materials required by the factories.

Osaka, January, 1908.

SHINPO.

EDITORIAL NOTE.—The list on a preceding page of Japanese manufacturing concerns which use crude rubber is believed to be the most complete and accurate yet compiled, and it comes at a time to supplement fittingly the letter from our correspondent "Shinpo" (a word meaning "progress"). A Japanese manufactory as a rule requires long credits and is disposed to cover all its requirements through a single native house with which it sustains close relations. Such a supply house is expected to keep its customers accurately posted with regard to market conditions, and when and where to buy. The rubber manufacturers, for example, buy supplies extensively through houses like Messrs. Dewette & Co., of Yokohama.

## Progress of Rubber Planting.

### RUBBER PLANTING IN THE PHILIPPINES.

AN increasing interest in rubber culture in the Philippines is reported by the bureau of forestry at Manila, under date of November 20, to THE INDIA RUBBER WORLD. Rubber has been planted in the district of Davao, in the island of Mindanao, and also on the island of Basilan and along the east and west coast of Zamboango peninsula. Reports from ten plantations show standing about 9,000 Pará rubber trees, 61,000 Ceará trees and 1,000 *Castilloa*—total 71,000. It is estimated that the acreage is about 366 and this represents probably two-thirds of the total planting in the vicinity. The planting of Pará seeds at stake has not been a success, but nursery seedlings "stumped" at planting have made a good growth in every case. Ceará seeds are always planted at stake. Hemp, coffee, cacao, and cassava have given good results as intercrops with rubber. The report indicates that there are large numbers of seedlings in the nurseries of the southern planters, which probably will be set out this year at the beginning of the rainy season. Considerable orders are being placed with dealers in the Far East for seeds of *Hevea* and *Castilloa*. The local production of Ceará rubber seed is already large.

There is a colony of some 60 Americans in southern Mindanao, representing 40 or more companies formed for the taking up of government lands for the purpose of growing hemp. Much fertile land there is still unoccupied and can be acquired in leasehold on very favorable terms. Recently the possibility of combining rubber with hemp has become apparent and one of the planters writes THE INDIA RUBBER WORLD that before long rubber seems destined to become one of the principal crops there. The Davao Planters' Association, established February 1, 1905, is composed mainly of hemp growers, but Secretary Max L. McCollough writes that there is a constantly growing interest in rubber. The association would like to see new interests represented in the district, and to facilitate in every way possible the introduction.

### RUBBER PLANTING IN MEXICO.

J. HERBERT FOSTER, manager of The Meriden Rubber Planting Corporation, reports (January 2) that the tapping done last fall on their plantation in Vera Cruz yielded more than 600 pounds of creamed rubber, from 4,800 trees, or a trifle more than 2

ounces per tree. It was the second tapping, and some of the trees yielded twice as much as last season. The cost is estimated at less than 20 cents (gold) per pound produced, against 25 cents one year ago, owing to the freer flow of latex. The trees were to be tapped again at once, and Mr. Foster expects to pay the expenses of the plantation this year from the sale of rubber.

Horace E. Levesley, managing director of The Mexican Rubber Co., Limited, owners of the plantation "La Esperanza," in Vera Cruz, is taking a vacation in Europe, the first he has enjoyed since he became associated with Mr. George Cullen Pearson several years ago in forming the plantation. Mr. Pearson has been residing in London for some time. There are now about 220,000 well developed trees on the property, and tapping on a commercial scale is expected to begin this year.

The Land Company of Chiapas, Limited, of London, have established a rubber plantation called "Eldorado," in Chiapas, in the neighborhood of the estate on which the late Señor Don Matias Romero did some rubber planting more than 30 years ago. The new company planted some 300 acres to rubber last summer.

Charles A. Leshner, for some years manager of "La Zacualpa" rubber plantation, has been appointed assistant to O. H. Harrison, at the head of La Zacualpa and the allied companies, with headquarters at Tapachula, Mexico. W. S. Fisher has been appointed manager of the La Zacualpa properties.

The 1907 annual report of the Continental Commercial Co. (St. Louis) gives the number of rubber trees (*Castilloa*) on their Mexican properties as follows: Jumiapa estate, 60,000; Oaxaca Coffee Culture Co. estate, 464,173; Monte Verde, 63,000; Lolita, 183,000; Pittsburg, 50,000; total, 820,173. They are from two years old upwards.

The shareholders of The Ohio Rubber Culture Co. (Canton, Ohio), have chosen as inspector of their plantation in Mexico this year Charles Eddy, of Akron, Ohio, who has started already on his inspection tour. Mr. Eddy is traffic manager of The B. F. Goodrich Co., with which firm he is reported to have been connected for 27 years.

Inspectors for most of the companies planting rubber in Mexico are now on the ground.



## Antwerp, Havre and Congo Rubber.

IN their annual review of the Antwerp market for 1907, Messrs. Grisar & Co., the official brokers, devote their attention mainly to two points: (1) a caution against the careless preparation of crude rubber, and (2) the progress of rubber planting in the Congo region. First, however, may be introduced a table of the arrivals of rubber at Antwerp during the last ten calendar years:

YEARS.	Congo State.	Other Sources.	Total.
1898.....Kilos	1,734,305	280,286	2,104,591
1899.....	2,992,414	410,416	3,402,880
1900.....	4,902,003	796,032	5,698,035
1901.....	5,417,456	431,742	5,849,202
1902.....	4,992,954	411,031	5,403,985
1903.....	5,180,401	546,082	5,726,483
1904.....	4,723,618	1,040,238	5,765,856
1905.....	4,442,607	1,271,121	5,713,728
1906.....	4,593,759	1,178,303	5,772,062
1907.....	4,346,141	708,332	5,054,473

Messrs. Grisar & Co. say:

"As the above figures show, the production of rubber in the territories of the Congo Free State has remained essentially the same as during the past few years. As pointed out in our previous market reports, the maintenance of a normal and regular production is due to the measures promulgated by the government, for the purpose of preventing the exhaustive working of the sources of rubber supply. The decrease in imports of the various kinds of rubber is explained by the fact that the greater part of the kinds produced in the French Congo are at present being shipped to the Havre market.

"The quality of the Congo rubber continues to be excellent and highly appreciated by the consumers. However, we are unfortunately unable to apply the same statement to the preparation of many lots which arrived here during the year in a defective or pitchy condition. We could scarcely be too insistent in our advice to exporters to devote their most careful attention to this matter, and to cooperate for the purpose of preventing the shipment of insufficiently dried goods, which cannot possibly withstand the frequent handlings to which they are subjected during transportation.

"Among the various kinds of rubber, those produced on the Asiatic plantations continue to meet with the greatest favor in our market on the part of consumers.

"We are pleased to again be able to report this year actual progress made in the Congo in the important matter of planting. In connection with the crop of the year 1906, the planting of 2,664,725 rubber trees and *lianes* has been reported. The total amount of planting thus exacted both from government employes and private parties covers at the present time about 15,000,000 plants, taking into account the inevitable waste which is a necessary factor in enterprises of this kind. In addition to the aforesaid plantations, the establishment of which is provided for by law, other fields for the production of sources of rubber supply have been provided for the care of the government and of commercial companies. As far as the government is exclusively concerned, the planting done by the same may be summed up as follows:

	End of 1905.	End of 1906.
<i>Lianes</i> (creepers).....	8,575,000	10,150,000
<i>Manihot</i> , <i>Hevea</i> , <i>Ficus</i> , etc.....	157,000	188,000
<i>Funtumia elastica</i> .....	753,000	1,187,000
Total .....	9,485,000	11,525,000

"The following system of planting has been adopted and made incumbent on the interested parties, viz: *Lianes* at a distance of 3 meters along the rows, instead of 1 meter, which was the distance previously adopted. For the *Funtumia*, the minimum distance was increased from 3 meters to 4 meters in every direction. The plentiful results obtained up to the present time make it safe to presume that henceforth the *Funtumia elastica*

will be planted exclusively, since their growth and output appear to give the best results.

"It will be well for all those concerned in this matter to take the foregoing considerations thoroughly to heart, inasmuch as they are based on practical experiments extending over a period of several years. [It is presumed that the reference here to results obtained from planting *Funtumia* relates to experiences elsewhere than in the Congo Free State, where the culture of this species has been begun only of late.—THE EDITOR.]

"In addition to the aforesaid species, the government continues to actively pursue the propagation of the *Hevea Brasiliensis* in the territories where the soil and climate are favorable for its growth. In order to increase the number of seeds derived from full grown trees, which are more especially found at Boma, Coquilhatville, and New Antwerp, about 128,000 *Hevea* seeds, packed in moist layers have been shipped to the Congo Free State during the year 1907 through the care of the Colonial Gardens at Laekens, Belgium. The shipments made last year under this system produced excellent results, 95 per cent. of the seeds having arrived at Boma in good condition." [The report here gives statistics of the production of plantation rubber in Ceylon and the Federated Malay States.]

"During the past year, the rubber market has been subject to violent price fluctuations, caused more particularly by the financial crisis than by the precarious condition of the rubber industry.

"After a firm start in January, prices were unfavorably influenced in March and thereafter by the abnormal arrivals at Pará, coincident with a tightness in the American money market. After the markets had remained in an inactive condition during the entire summer season, with stocks increasing everywhere, the decline in prices increased rapidly during the fall months, and in November the intensity of the financial crisis made the bottom fall out of Pará rubber quotations, which finally declined from 5s. 1/2d. (in January) to 3s. 3 1/2d. We have to go back to the year 1902 to find equally low prices. This condition of the market actually paralyzed business.

"Towards the end of the year the market remained demoralized in consequence of the violent fluctuations of Pará rubber, and we therefore terminate the year with an average decline of about 28 per cent. against the quotations in December, 1906, as shown by the following figures:

### COMPARATIVE ANTWERP PRICES (FRANCS PER KILO).

GRADES.	End Dec. '06.	End Dec. '07.	Decline.
Kasai, red, I.....	13.20-13.45	9.00-9.40	30.11%
II kind.....	11.10-11.35	8.10-8.40	25.99%
Kasai, black.....	12.90-13.20	9.00-9.40	28.78%
Equateur, Ikelemba,			
Lopori, etc.....	13.30-13.50	9.00-9.40	30.37%
Upper Congo, ordinary.....	11.80-12.05	8.50-8.80	26.97%
Aruwimi Uelé .....	11.25-11.65	8.50-8.80	24.46%
Mongala strips.....	11.25-11.65	8.50-8.80	24.46%
Red thimbles (root rubber). 6.25- 6.75		4.25-4.50	33.33%
a Pará fine .....	5s.-5s. 2d.	3s. 4d.-3s. 6d.	32.25%

[a In English money, per pound.]

[Ten francs per kilogram=87 1/2 cents per pound.]

### THE HAVRE MARKET.

A REVIEW of the rubber trade at Havre for 1907 has been issued by Jean Roederer, broker, of that port, the text of which is reproduced here:

"Thanks to the impulse given the Havre market during the past year in consequence of the decision taken by the principal companies holding concessions in the French Congo to ship their rubber in future to this market, the said market has become of considerable importance not only for Congo grades, but likewise for those originating from the other French colonies, such as Madagascar, Tonkin, and the Soudan.

"The geographical location of our port with its important system of regular navigation lines, insuring convenient and economical transportation in every direction throughout the world, appears to make it readily available for development into a general storage place for the sale of rubber in France. The imports of Havre have been:

	1906.	1907.
From the French Congo.....Kilos	314,025	892,678
Other sources (except Pará).....	339,847	232,321
From Pará .....	3,738,055	3,339,847
Total .....	4,391,927	4,464,123

"Importers have adopted the subscription method to facilitate the converting of their rubber into cash, a system which has stood the test in other markets [notably at Antwerp].

"Notwithstanding the comparatively large quantities imported this year, the goods found a ready outlet at prices largely equivalent to the parities of the regular markets. Only towards the end of the year, when the holders refused to accept the general decline, a certain quantity of rubber was withdrawn. For this reason we have been left by the end of December with an unsold stock of about 120 tons.

"The quality of the rubber imported from the French Congo is highly appreciated by the consumers, the product being homogeneous and generally of fine quality.

"The quality of the rubber produced in the Gabon district would be greatly improved if the different grades of which this

kind of rubber is composed could be adequately separated in Africa before shipping the goods, since the handling to which they must be necessarily subjected here is very injurious to the appearance of the product.

"The rubber market during the past year has felt the effect of the periods of financial crisis which have most seriously disturbed certain lines of goods and branches of industry.

"Prices have consequently undergone violent fluctuations, more especially during the second half of the year, at which time the crisis appears to have reached its most acute point. The highest and lowest quotations of Pará rubber during the year in question show, for instance, a total decline of about 35 per cent.

"The increase of the arrivals at Pará is not so large that it would not find an outlet for consumption by the present rubber industry, and the chief cause of the decline is closely connected with the commercial and financial crisis through which we are passing. However, the worst periods appear to be a thing of the past and an early revival of business does not seem impossible."

#### TOTAL IMPORTS OF RUBBER AT HAVRE.

Kilos.	Kilos.
1898 .....2,138,000	1903 .....1,862,000
1899 .....1,856,000	1904 .....2,188,000
1900 .....2,350,000	1905 .....3,291,000
1901 .....2,241,000	1906 .....4,391,927
1902 .....1,948,000	1907 .....4,464,123

## The Manufacture of Balata Belting.

*By an English Correspondent.*

**B**ALATA belting, which, for fifteen years was made solely by Messrs. R. & J. Dick, at Glasgow, under their patent, is now being made by several firms, the original patent having expired. The manufacture has mostly been taken up as a side branch by india-rubber works in England and Germany, though in certainly two instances it forms the sole business of the companies concerned. Although balata is not rubber, its manufacture resembles that of the latter to the extent that inferior material may be made to pass muster as the genuine article when cheapening of the goods is resorted to in order to meet competition. Already the cheapening process has made such headway that balata belting is to be met with in which the product of the Venezuelan or Guianan forests forms only a fraction of the organic matter present. This procedure, the initiation of which is ascribed rightly or wrongly by British manufacturers to their German competitors, has naturally led to a good deal of worry in business circles.

Of course it may be an open question as to whether the use of the best quality balata is really necessitated, and indeed there is plenty of evidence that the second quality belting openly sold as such by British firms gives perfect satisfaction in its employment. Messrs. Dick, however, I believe I am right in saying, only supply pure balata belting now as of yore, and despite the new competition they continue to do a large business at prices on a higher level than obtain with the rest of the trade. How long this will go on remains to be seen; if it should turn out that the cheaper belting of other makers is found to give satisfactory results, one can hardly imagine that the supremacy of the Glasgow firm will remain unaffected. In Free Trade England the German makers of certain classes of rubber goods have been accustomed to dump their excess production at prices with which home manufacturers have found it exceedingly difficult to compete, and from what reaches me from commercial circles it would seem that something of the sort is being done with balata belting. This is now being energetically pushed by London distributors at prices which suggest an effort to get business at whatever cost, to judge by the liberal discounts allowed off the list prices of really good quality.

From these remarks it will be seen then that the British manufacture, though so young as a competitive industry, has early had to contend with business conditions of a disquieting nature. It is matter for consideration whether the output will not before long exceed the demand. There is no reason to suppose that belting generally has suddenly sprung into greatly increased demand, and it is a fair surmise that a good deal of the business done in balata belting is at the expense of leather, rubber, cotton, or camel hair.

The principal advantage possessed by balata belting over other materials, such as leather and cotton, is in resistance to damp, though as an offset to this its liability to soften at moderately high temperatures renders it of much less utility than other materials in warm climates. In this respect it is of course not inferior to gutta-percha belting, which is made to a limited extent, but it cannot compete with rubber belting or with the special form of hair belting brought out by Reddaway & Co., and which has a vulcanized rubber coating all over its surface and sides. Exceptional situations and purposes apart, however, it is clear that the low price and general utility of balata belting foreshadow increasing sales in the future. To quote only one special instance where it has recently come into favor, we have the elevator belts used in running machinery, especially for raising ore which has been crushed under water. Such belts are about 40 feet long by 9 inches wide, and are continually in contact with cold water.

The firms now actually manufacturing balata belting in Great Britain are R. J. Dick & Co., Glasgow; Turner Brothers, Limited, of Rochdale, the well known asbestos manufacturers; the Irwell and Eastern Rubber Co., Salford, Manchester; and The Manchester Balata Belting Co., of Clayton, Manchester, with which concern rumor associates the name of Messrs. Frankenburg. The Gandy Belt Manufacturing Co., of Seacombe, Cheshire, a concern which a few years ago bought up the rights of Velvrl, Limited, as far as the belt manufacture is concerned, are certainly announced as balata belt dealers, but like several other home and foreign firms there seems some doubt as to whether in this particular article they come strictly into the category of

manufacturers. Among German firms who make a specialty of balata belting are the Guttapercha-Waaren und Treibriemen-Fabrik of Löwitz & Rohlf, at Altona, a suburb of Hamburg, and the firm of Scholtz, of the latter city; the well known Calmon Rubber and Asbestos Works being also credited with making it. The large belts made by the Altona rubber company mentioned above have already had pictorial mention in *THE INDIA RUBBER WORLD*. I may say that it is not the easiest matter in the world to give a list of the actual manufacturers; mention may be made, however, of the Christiania (Norway) balata belting factory, Den Norse Remfabrik.

To give a synopsis of the balata belting manufacture, it may be stated in a general way that the machinery used closely resembles what is ordinarily employed in a rubber works. So far the business has not been of importance enough to warrant the rubber machinery makers issuing special catalogues, and the work so far done has been rather to the design of the individual belting manufacturers than from standard patterns of machinery. Of special mention in this connection is the firm of William Rowan & Sons, Park lane, Bridgton, Glasgow, who have specialized in balata belt machinery.

To return, however, to the manufacture, the raw balata, which is used both in the form of sheet and block, after having been washed and dried, is dissolved to a thick paste in coal tar naphtha or shale spirit if the current price is in the latter's favor. This operation is carried out in a large closed-in vessel which hardly calls for minute description. The fabric, which is a coarse canvas, is passed through the solution on the belt sticking machine which in its form much resembles an ordinary spreading machine. When the solutioning has been completed and the solvent evaporated, the fabric is doubled to form a four-ply and passed through calender bowls whereby the balata is forced into the interstices of the canvas to form a homogeneous mass. The subsequent process of stretching is of some importance both to the manufacturer and the purchaser. The former is benefitted by the increase of length obtained and the latter by having the belt well stretched at first is free from trouble associated with "taking up" after the belting has been in use for some time.

There is general testimony among users of balata belting to the non-necessity of taking up and the claims of the manufacturers in this respect need not be considered exaggerated. This stretching operation is carried out on a special machine worked by hydraulic power. In the case of endless belting the making of a perfect joint is an important *desideratum*, and for the purpose a solution of balata in bisulphide of carbon is commonly used, the exact proportion of the ingredients being a matter requiring careful attention. The coating of balata which forms the face of the belt and which is put on after the compression in the calendar may be of the same composition as that of the naphtha solution, but is not always so. In some makes of belting a different material is used and economy has also been effected by the admixture of a small amount of mineral matter.

#### FIRE HOSE DAMAGED BY ACID.

**T**HE care of fire hose is a matter that the chief engineer of every well managed fire department is constantly watching and to which he gives his close attention. Now and then, however, by accident or through the carelessness of persons to whom this duty is assigned, in handling acid carboys or acid charges in close proximity to fire hose, a small quantity may be thrown on the fabric jacket and ruin several hundred feet of high grade and expensive hose as it lies coiled up in the fire station, or when chemical engines are being recharged at fires. These accidental occurrences are not always noticed, until, at the next succeeding fire, the hose, to all intents and purposes, appears to be defective, and, in some instances, is returned to reputable and reliable manufacturers, with the complaint that it has not stood the test of

wear guaranteed, and a request that the defective goods be replaced. These demands, of course, are made in good faith and in ignorance of the true cause that put the hose to the bad. A little care in handling acids will entirely prevent the foregoing trouble. Sometimes, however, this may occur at fires in buildings where chemicals are manufactured or stored, and vessels containing acids are broken, and the acid mingles with the waste water and saturates the hose lines which have been run into the burning building.—*Fire and Water Engineering*.

#### A FELT AND RUBBER COMPANY IN CANADA.

**T**HE readers of *THE INDIA RUBBER WORLD* will perhaps remember the felt and rubber footwear factory that was started at Saugus, Massachusetts, as the Snowdrift Footwear Co. [See our issue of July 1, 1900—page 267.] But for some reason or other it went out of business, not because of inherent fault in the goods but in all probability from lack of capital. The inventor of this type of footwear, Mr. H. C. Richardson, of Haverhill, Mass., was more successful in Canada, where he started the Brantford Felt and Rubber Co., Limited, which is now operating successfully. The company's factory is situated at Holmdale,



THE BRANTFORD FACTORY.

where they have four buildings of mill construction, one of them three stories 155×55 feet, and the three other two-story buildings which are respectively 88×34 feet, 55×21 feet and 26×57 feet. This plant gives them room to make 250 pairs a day and at the present they are making about one-half that ticket. The company, by the way, are working under Mr. Richardson's patents. The issues in the United States were numbered as follows: The first, issued August 28, 1906, No. 829,487. The additional patents were September 2, 1907, No. 864,916, and October 15, 1907, No. 868,484. The product of the company is wholly confined to footwear of felt and rubber made under these patents, the line covering a stormproof boot, a dry snow boot, a snagproof gum over, and a patent fold felt sock. The goods are exceedingly tasteful in appearance and are very durable, and have appealed very strongly to Canadian footwear dealers.

THE Faultless Rubber Co. (Ashland, Ohio) are marketing a new line of cloth lined rubber goods—water bottles, fountain syringes, and combinations—under the brand "Wearever," which are referred to as being very light, strong, and durable. They come in maroon (non-blooming) or white, with smooth or ribbed surface.

THE Selangor Government Gazette in a recent issue contained a notice regarding a patent for an invention for "a wheel for motor cars or other vehicles manufactured in one entire piece and wholly from rubber, gutta-percha, or other elastic materials." rials."

SEND for the Index (free) to Mr. Pearson's "Crude Rubber and Compounding Ingredients."



## Recent Patents Relating to Rubber.

### UNITED STATES OF AMERICA.

ISSUED DECEMBER 10, 1907.

- N**O. 873,016. Pneumatic and solid tire for vehicle wheels. J. Burnham, London, England.
- 873,021. Electrotherapeutic syringe. H. R. Cool, Bradford, Pa.
- 873,143. Garden reel. R. D. Wirt, assignor of one-fourth each to E. C. Wilson and R. Keables, all of Philadelphia.
- 873,275. Catheter user's portable mechanical assistant. J. F. Spalding, Kansas City, Mo.
- 873,420. Rubber mat [having vulcanized therein a multiplicity of metal spheres]. T. P. Farmer, Southwest Harbor, Me., assignor to Protective Tread Co., Boston.
- 873,501. Elastic tire for wheels. T. L. Carbone, Charlottenburg, Germany.
- 873,510. Rubber boot and shoe. T. Crowley, Lambertville, N. J.
- 873,551. Rubber boot and shoe. T. E. Hurley, Beverly, Mass.
- 873,602. Overshoe. J. D. Price, assignor of one-half to H. G. Powell, both of Cleveland, Ohio.
- 873,627. Valve for hermetically closable jars. Gray Staunton, Chicago. [The principle involved is illustrated in connection with a former patent granted to the same inventor, in THE INDIA RUBBER WORLD, December 1, 1905 on page 83.]

#### Trade Marks.

- 29,617. New Miraculum Corporation Ltd., Melbourne, Australia. The word *Miraculum*. For a tire filler.
- 29,937. Goodyear's India Rubber Glove Mfg. Co., Naugatuck, Conn. A glove in outline. For rubber footwear.
- 29,953. Mount Vernon Belting Co., Baltimore, Md. The words *Mount Vernon*. For stitched canvas belting.
- 30,015. Woonsocket Rubber Co., Woonsocket, R. I. Outline of Atlas shouldering the world. For rubber footwear.
- 30,403. George Borgfeldt & Co., New York city. The word *Coronet*. For rubber combs.
- 30,809. National India Rubber Co., Bristol, R. I. The word *National*. For rubber footwear.
- 31,006. United States Rubber Co., New Brunswick, N. J. The words *Bridge Brand*. For footwear.

ISSUED DECEMBER 17, 1907.

- 873,728. Syringe [with compressible bulb]. B. F. Crisenberry, Elwood, Ind.
- 873,738. Vehicle tire. J. Eckhard, Buffalo.
- 873,841. Vehicle wheel [with hollow rubber cushioning balls]. C. E. Cole, Cleveland.
- 873,892. Hose coupling. G. E. Petterson, Pine Bluff, Ark.
- 873,907. Vehicle wheel [with resilient tread]. W. E. Snediker, New York city.
- 873,919. Protecting shield or guard for pneumatic tires. W. S. Arnold, San Francisco.
- 873,928. Overshoe holder. G. W. Dopkins, Morris, Minn.
- 873,940. Electrical connection for hose couplings. F. Hoffman, Cincinnati.
- 873,957. Vehicle tire. G. A. Pearse, Jr., New York city.
- 874,026. Life preserver. A. Necker, Philadelphia.
- 874,092. Ear tip for stethoscopes and other aural instruments. C. H. Liverpool, Boston.
- 874,101. Waterproof fabric. E. Merou, Paris, France.
- 874,251. Implement for massage, shampooing, and other purposes [having a rotary body position of hard rubber, with soft rubber teeth]. H. F. Schelling, Weehawken, N. J.
- 874,287. Machine for coating the strands of a thread and also the twisted thread. E. D. C. Bayne and L. A. Subers, Cleveland.
- 874,324. Means for attaching tires to vehicle wheels. E. Gerbert, Waltershausen, Germany.
- 874,340. Rubber overshoe. F. C. Hood, Boston.

#### Trade Marks.

- 28,844. The Cravenette Co., Ltd., Bradford, England. The word *Cravenette*. For clothing.
- 30,730. Boston Rubber Co., Boston. A bell in outline. For rubber footwear and clothing.

ISSUED DECEMBER 24, 1907.

- 874,844. Detachable wheel rim. R. Healy, Brooklyn, N. Y. [Mr. Healy is connected with the Healy Leather Tire Co., of New York.]
- 30,319. W. H. Sterling, New York city. The words *Tire Life*. For tire filler.

ISSUED DECEMBER 31, 1907.

- 874,951. Overshoe retainer. R. F. Fraizer, Cloverdale township, Putnam county, Ind.
- 874,964. Pneumatic tire protector. W. M. Jamieson, Te Papa, near Onehunga, New Zealand.

- 874,982. Conveyer belt. H. C. Norton, San Francisco.
- 874,983. Foot and leg bath for horses. H. R. O'Brian and J. R. Coulter, Oxford, Ohio.
- 874,984. Implement for applying rubber tires. [For solid tires.] S. A. Oliva, Danbury, Conn.
- 875,019. Hose clamp. H. A. Wahlert, St. Louis.
- 875,053. Pneumatic tire. C. E. Duryea, Reading, Pa.
- 875,144. Rubber sandal. A. O. Bourn, Bristol, R. I.
- 875,298. Rubber compound and material for use in making the same. [Comprising the bitumen from asphaltic petroleum and rubber.] E. W. Strain, Philadelphia.
- 875,351. Resilient tire. I. W. Hodgson, Minneapolis, assignor of one-fourth to P. W. Herzog, St. Paul, Minn.
- 875,397. Bottle stopper. E. M. Willis, Kenton, Ohio.
- 875,439. Elastic webbing. S. Kops, New York city.
- 875,542. Tire valve stem protector. C. W. Lufey, Little Rock, Ark.
- 875,574. Rod packing. O. J. Garlock, assignor to The Garlock Packing Co., both of Palmyra, N. Y.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

### GREAT BRITAIN AND IRELAND.

#### PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1906.

\*Denotes Patents for American Inventions.

- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 4, 1907.]
- 17,804 (1906). Steel studs for tire tread bands. F. W. Brampton, Wolverley.
- 17,983 (1906). Pneumatic tire between inner and outer rims, the latter being flexible, formed of leather and riveted metal, and having an tread. W. J. Harvey, London (W. A. Hassen, Cape Town.)
- 18,048 (1906). Billiards, with rubber pads, for an ordinary dining table. T. W. Graves, London, and R. Arrowsmith, Staffordshire.
- 18,110 (1906). Screw stopper with rubber ring. D. Hurst, A. E. Frost, and G. J. Orange, Lancashire.
- 18,125 (1906). Spring wheel, with solid rubber tread enclosing a pneumatic tube. B. J. Macauley and J. A. Hall, Eastbourne.
- 18,192 (1906). Segmental rings instead of security bolts for attaching pneumatic tires. H. Reid, A. T. Reid, and J. Rickie, all of Glasgow.
- 18,264 (1906). Goloshes with wearing sheet of leather in the heel. A. C. Nicholls and J. G. Selley, Canterbury, New Zealand.
- 18,314 (1906). Hose reel. H. Denton, Huby, Leeds.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 11, 1907.]
- 18,414 (1906). Pneumatic tire with recessed tread to prevent slipping. H. G. Harold, Brockley.
- 18,457 (1906). Detachable wheel rim. Austin Motor Co. and H. Austin, Northfield.
- 18,509 (1906). Elastic tire composed of a series of blocks. J. V. F. A. Yberty and E. B. Mergoux, Royat-les-Bains, France.
- 18,557 (1906). Detachable tire carrying rim. F. H. Richardson, Sunderland.
- 18,569 (1906). Pneumatic with studded tread band. L. C. de Mocombe and A. Demase, Paris, France.
- 18,587 (1906). Machine for the manufacture of pneumatic tire covers, formed either with beaded or wire edges, in one operation. New Eccles Rubber Works, and J. George, Eccles.
- 18,646 (1906). Spring wheel with elastic tire. R. Rayson and S. Davis, Windsor, Victoria, Australia.
- 18,813 (1906). Detachable tire carrying rim. R. Finlay, Gateshead-on-Tyne.
- 18,930 (1906). Spring wheel with pneumatic or solid cushion. C. J. Petric, London.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 18, 1907.]
- \*18,958 (1906). Horse brush. J. C. Hickson, Nathalie, Va.
- 18,963 (1906). Detachable rim for pneumatic tires. F. Loustaunau, Paris, France.
- \*18,968 (1906). Pads for boot buffing machine, composed partly of sponge rubber. P. M. Justice, London. (Manufacturers' Machine Co., Montclair, New Jersey.)
- 19,025 (1906). Detachable rim for pneumatic tires. F. Loustaunau, Paris, France.
- 19,052 (1906). Rubber tips for billiard cues. W. and F. Wunsch, Aachen, Germany.
- 19,090 (1906). Spring wheel, with pneumatic tube seated in a wooden ring enclosed in a metal trough carried by the felloe. B. C. Ouradou, Perpignan, France.
- 19,165 (1906). Rubber eraser formed also for use as a pencil holder

- and point protector. C. A. F. Gregson and G. Rayner, Norfolk.
- 19,201 (1906). Tire cover with tread formed of layers of jute or hemp, treated with emery and shellac solution, and solutioned together and covered with rubber. J. Blumfield, Beccles.
- \*19,221 (1906). Tire rim with outwardly flaring flanges. E. Chaquette, New Rochelle, New York.
- 19,224 (1906). Spring wheel with elastic tire. J. Slee, Earlestown.
- 19,230 (1906). Detachable tire carrying rim. Count G. Szechenyi, Vienna, Austria.
- 19,329 (1906). Pneumatic tire with puncture preventing band of leather. J. Lelong, Loue, France.
- 19,337 (1906). "Twin" elastic tires spaced apart to minimize dust raising. E. Easton and G. Franklin, Southampton.
- 19,342 (1906). Nonskid studs for tire treads. G. W. Beldam, Ealing.
- 19,438 (1906). Fabric with zigzag wire embedded for tire treads. J. Byron, Liverpool.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 27, 1907.]
- 19,590 (1906). Pneumatic tire. I. Weening, London.
- 19,598 (1906). Bolt for securing pneumatic tires to detachable rims. Baron V. Barreto, Marlow.
- 19,648 (1906). Heel protector. W. H. Davis, Canton, Cardiff.
- 19,671 (1906). Pneumatic tire with a series of parallel air tubes inflated by one valve and branches thereof. J. Waite, Chelmsford.
- \*19,715 (1906). Spring wheel with pneumatic and rubber cushioned hub. C. F. Marohn, Milwaukee, Wis.
- 19,722 (1906). Heel protector. F. W. Schroeder, London.
- 19,894 (1906). Utilization of waste rubber. [See THE INDIA RUBBER WORLD, January 1, 1908—page 107.] T. Gare, New Brighton.
- 19,905 (1906). Studded tread band of balata belting for pneumatic tires. P. F. Wiley, Boscombe.
- 19,955 (1906). Pump valve. W. H. Lewis, New Brighton.

### THE FRENCH REPUBLIC.

Patents Issued (With Dates of Application).

- 377,937 (May 2, 1907). E. W. Baker. Attachment of tires to wheels.
- 377,976 (May 21). P. Buthion. Product for rendering asbestos indestructible.
- 377,992 (May 21). F. A. Ellis. Tire.
- 378,006 (May 22). A. F. Bucchini. Multiple air tubes for tires.
- 378,048 (May 23). E. Guibert. Elastic wheel.
- 378,168 (May 25). J. L. Villard. Cover for tires.
- 378,191 (May 28). G. Plasse. Elastic wheel.
- 378,236 (May 29). J. Desoucher. Elastic wheel.
- 378,261 (May 30). A. Latimer. Cover for tires.
- 378,282 (May 30). Denning and Foster. Protective tread for tires.
- 378,309 (April 6). E. J. L. Broux. Sectional pneumatic tire.
- 378,315 (May 6). Perez and Castelltort. Tire protector.
- 378,251 (Aug. 4, 1906). Rouxville. Process for reclaiming rubber.
- 378,209 (May 28, 1907). J. W. V. Mason. Machine for vulcanizing and finishing rubber shoes.
- 378,351 (May 18). Doolittle. Attachment of tires to wheels.
- 378,399 (June 1). L. Sellier. Tire protector.
- 378,588 (May 31). H. Guerin and Jais. Elastic tire.
- 378,603 (June 7). Silverwood. Attachment of tires to vehicles.
- 378,600 (June 7). Société J. Hausmann et fils. Nipple for infant's bottle.
- 378,691 (June 11). Baglin. Protective tread for tires.
- 378,731 (June 12). P. Buchillet. Tire protector.

[NOTE.—Printed copies of specifications of French patents may be obtained from K. Bobet, Ingenieur-Conseil, 16 avenue de Villiers, Paris, at 50 cents each, postpaid.]

### NEW RUBBER RECLAIMING PROCESS.

THOMAS GARE, of New Brighton, England, is out with a patent for reclaiming rubber by a combined mechanical and chemical process which consists in powdering vulcanized scrap, softening it in boiling resin, feeding it through a tubing machine, the die of which consists of a number of small orifices [The late Robert Cowan had a patent on this for cleansing reclaimed rubber] and doing the whole thing within 5½ minutes, the mass entering the tubing machine as a semi fluid and emerging as completely regenerated rubber.

EMPIRE State Tire Co. (Buffalo, New York), the incorporation of which was noted in THE INDIA RUBBER WORLD October 1, 1907 (page 26), have the New York rights for the Greenwald tire patents. They have erected at Nos. 198-200 Terrace, Buffalo, a complete tire repair plant, and plan to install repair plants for garages or repair stations. They have secured as superintendent Lemon Greenwald, formerly of Akron, Ohio.

### TESTS OF NON-DEFLATION TIRE TUBES.

FOR several months the mechanical branch of the Association of Licensed Automobile Manufacturers, through its tire committee, has been endeavoring to cooperate with tire makers toward the elimination of annoyances from tire troubles in the nature of blowouts and punctures. Many interesting tests have been made for elasticity and resiliency of various rubbers used in tires, and extensive research has been given to the cause of blowouts and punctures.

It has been discovered that in a large percentage of the blowouts the cause was from heat generated inside of the tube from friction, which caused an expansion of the tube itself, so that when the tire came in sudden contact with a sharp stone or other obstruction there was not enough space for contraction in the tube, and necessarily something had to give way, thereby causing the blowout.

Henry Souther, metallurgical expert for the association, has just completed a remarkable test for heating, and his report shows conclusively that the time is near when the chances for blowouts will be minimized. The test was made with a non-deflation tube and two other ordinary makes of tubes, to ascertain if possible the comparative heating properties.

To obtain accurate measurements of degrees two thermometers were made and inserted by drilling holes through the wooden felly and metal rim of the wheel and using a steel case opened on the lower end in which the thermometer was inserted. The case was shaped like a large valve, similar to the valves on ordinary tubes with a cap projecting through the felly, so that by removing the cap the thermometer, which had been placed in contact with the tube, could be seen and the degrees of heat recorded.

The test was made on a run from the Engineers' Club to Long Island City and thence to Patchogue, L. I., a distance of 68 miles. The conditions of the road in many places were such that high speed was possible and 48 to 52 miles per hour for six or eight miles was attained. The average speed on the trip was 36 miles. Mr. Souther's report mentions that a certain non-deflation tube named by him runs cooler than ordinary inner tubes. His report reads:

"Just how much cooler this would be in hot weather, I am not prepared to say, but judging from the laws of heat the percentage of increase above atmosphere ought to hold, and that is the reason this method of summarizing had been used.

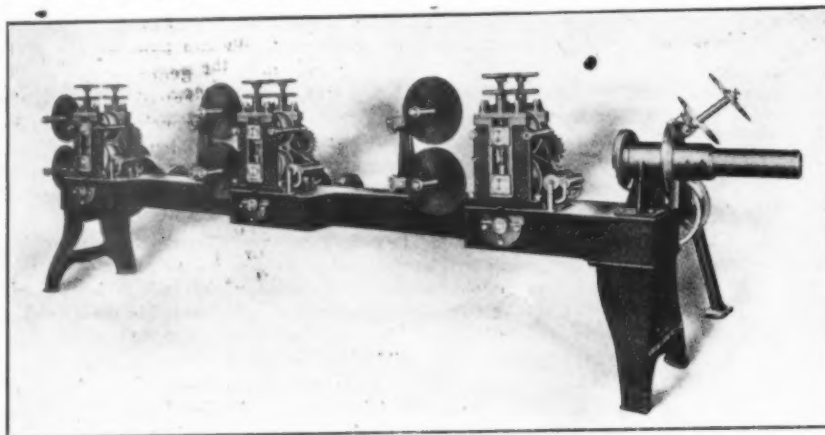
"That is to say, in hot weather with the temperature of 70° F., the increase would be for the regular inner tube 60 per cent. or 42° F., and making a total temperature of 112° F., whereas, from the results of my experiments I find an increase in the temperature of 45 per cent. in the deflation tube, making it only 101.8° under the same conditions.

"The reason for the cool running of this non-deflation tube is very obscure. It is a well known fact to all familiar with the work done by tires that the more material in the tire the more work is done in moving over the road under a given load. In this non-deflation tube there is more material than in the simple tube, caused by double walls and the plastic material between the double walls, which make it non-deflating. Consequently many skilled in the art have believed that this tube would run hotter. I consider that belief erroneous, in view of the tests which I have just made."

THE secretary of agriculture of the United States said recently in a public address that for years his department had been distributing camphor trees, and that thousands of trees were growing in the southern and Pacific coast states. Camphor had been made successfully from some of these, on an experimental scale. A manufacturing concern using \$500,000 worth of camphor yearly was forming a 2,000 acre grove of camphor trees in Florida, with a view to making their own camphor.

### THREE HEAD RUBBER COVERING MACHINE.

THE machine illustrated here is of very rigid construction, and is designed for handling wires and cables up to  $3\frac{1}{2}$  inches diameter. It consists of a rigid bed, provided with heads driven by bevel gearing from the main shaft which runs along the side of the bed. Each head is provided with compensating gear-



LARGE THREE HEAD RUBBER COVERING MACHINE.

ing, by which arrangement the cutters can be reground when dull, and used until considerably reduced in diameter.

The heads are so arranged that one housing can be taken away in order to change the cutters without removing the shaft or gearing. Each head is provided at the back with wire and rubber strip guides and an arrangement for holding the rolls of rubber. At the front is a pair of wooden rolls with spring tension driven by a small belt from the cutter shaft for carrying off the scrap.

The cutters or compression rollers are 9 inches in diameter, and are made of hardened steel, shaped and ground to the proper size. The rolls of rubber used on the machine are 14 inches in diameter and of the proper widths to suit the wire or cable.

A countershaft is furnished with the machine which has 24-inch tight and loose pulleys for a 6-inch belt, and should make 150 revolutions per minute. This gives a cutter speed of 24 revolutions per minute, and feeds the wire or cable through at the rate of 56 feet per minute.

A cross shaft at the front of the machine is geared from the main shaft, and has a 14 x  $2\frac{1}{2}$ -inch flanged pulley for driving a wind-up fixture.

The floor space of machine is 14 x 3 feet, and the net weight of machine and countershaft, 4,200 pounds.

A taping head, shown on the cut, placed at the extreme front of the bed can be furnished when desired. This taping head has a 4-inch hole through the spindle, and carries a roll of tape  $10\frac{1}{2}$  inches diameter of any width up to 6 inches. The floor space, with taping attachment, is 16 x 3 feet. The machine is manufactured by the New England Butt Co. (Providence, Rhode Island).

### WASHING RUBBER GOODS.

IT is not only raw rubber that needs washing.

Many of the smaller articles in soft rubber, after vulcanizing and trimming, must be washed and scoured to remove stains. The ancient way was to do most of this by putting them in tumbling barrels, sometimes with a charge of sand and pumice stone added, and removing the

stains by simple attrition. Of late years, however, a certain amount of wet cleansing has been done, and instead of inventing their own machine for it the rubber trade turned to the great cleansers of the world, the American Laundry Machinery Manufacturing Company, and took a machine—the Watkins washer—built for an entirely different purpose, and found it worked perfectly. An illustration of the machine is given herewith.

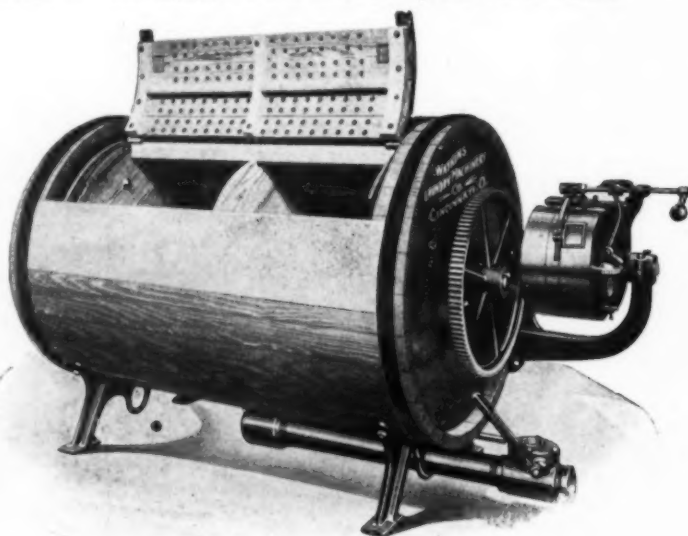
### BEDS FOR OCEAN CABLES.

RADIOLARIAN ooze and other soft muds in the deeper parts of the ocean floor make a good bed for ocean cables to rest in, and we learn from Dr. Klotz, who has been telling the story of the British Pacific cable, that cable steamers will swerve many miles from a straight line to avoid craters and hard, undesirable ground and find a mud floor, where the line is least exposed to injury.

At the present prices of gutta-percha, the essential envelope of copper cables, it is highly desirable to find widespread beds of radiolarian or globigerina oozes, which help to give long life to these channels of communication. Deep sea cables last

much longer in the tropics than in the northern oceans, and the reason is that in the tropics the marine life, whose remains are the largest constituent in the formation of the soft muds of the sea floor, is more abundant than in the waters further north or south.—*New York Sun*.

THE Bayne-Subers Tire and Rubber Co. (Cleveland, Ohio), the incorporation of which was noted in *THE INDIA RUBBER WORLD*, November 1, 1907 (page 59), have not yet made any announcement regarding their purposes, but it is known that the organizers of the company have been experimenting for the past two years on a certain manufacturing process for the betterment of the automobile tire and high pressure tubing of all descriptions, the principle of which is outlined in United States patent No. 837,041, issued to E. D. C. Bayne and L. A. Subers.



THE WATKINS "A" WASHER.



## New Rubber Goods in the Market.

### ANOTHER "STICK FAST" SHOE.

**E**X-GOVERNOR BOURN, of the Bourn Rubber Co., has for years been an inventor and investigator in rubber. He has lately brought out a sandal, ribbed in the inner side of the vamp, designed to be an "invisible" rubber that will stay on the shoe. The general detail will be seen from the outline drawing herewith.



ANOTHER "STICK FAST" SHOE.

### A LARGE ATOMIZER.

The accompanying illustration from a recent catalogue of the Russian-American India Rubber Co. (St. Petersburg) indicates what probably is the largest atomizer, including rubber in its make up, that has ever been placed upon the market. Assuming the figure in the engraving to represent a man of average height, an idea of the size of the atomizer may readily be gained, and it is left to the reader who may be interested in articles of this class to decide for what purposes the Russian production may be adapted.



A LARGE ATOMIZER.

### TIRE CASE LUGGAGE CARRIER.

A new form of luggage carrier and one that takes up so little space that it is a very great convenience is being marketed by J. B. Brooks & Co., Limited, Birmingham, England. In fact when it is considered that this luggage carrier fits into the spare tire cover, it may be said practically to fill no space. Its size is such that it can carry inner tubes, clothing, or any article that could naturally find its way into a tire case, and instead of being a burden, it gives the satisfaction of making use of room that heretofore has as good as gone to waste. The carriers are made from tan waterproof canvas lined with linen and fitted with loops for razors, combs, and pockets for sundries. A loop is fitted to it and four straps secure it within the spare tire cover.

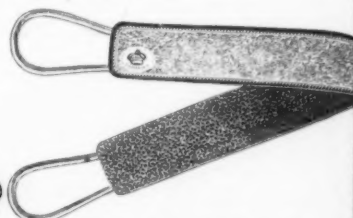
### RUBBER SPONGE BATH MIT AND BATH BELT.

Three illustrations shown herewith relate to novelties the manufacture of which involves the use of sponge rubber. In the case of each of these strong duck is used, with one side covered with a thick layer of rubber sponge; the shape of each article being sufficiently indicated by the engravings. On the other

side is a fabric such as Turkish toweling. Many applications of these articles for the toilet will readily suggest themselves, but it may be mentioned that they have been heartily recommended by physicians for massage. The belt here illustrated is



LOOFAH MIT.



SWEDISH MASSAGE BELT.

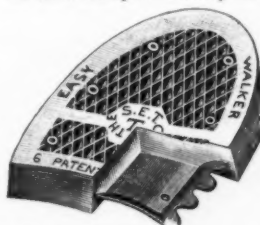


REVERSIBLE BATH MIT.

convenient in size and easy to manipulate and has the advantage of bringing both hands and arms into action, thereby adding to the artificial means of getting health and beauty by exercise. These goods are protected by patents. [Hanover Rubber Co., Limited—Julius Lehmann, American agent, New York.]

### THE "EASY WALKER" RUBBER HEEL.

An advantage of the "Easy Walker" rubber heel is that it can be attached permanently to shoes without the aid of cement or leveling the heel seat. It is referred to as being made of good

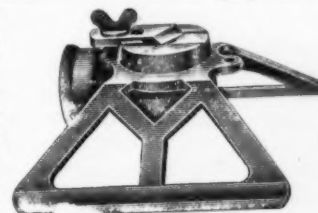


"EASY WALKER" RUBBER HEEL.

wearing rubber, in all sizes for men and women, both full and half heels, and is sold generally by leather and findings dealers in the United States and abroad. It is pointed out that these heels are not sold at as low a price as heels which do not contain the patent spring steel holding plate which forms an important feature of the "Easy Walker." [The Springfield Elastic Tread Co., Springfield, Ohio.]

### THE "COMBINATION" LAWN SPRINKLER.

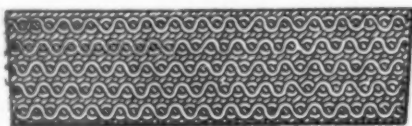
The Combination lawn sprinkler shown in the cut gives not only a full circle but by means of a cut-off the spray can be regulated so as to cover any desired fraction of a circle. When the brass slide is pulled back the usual full circle spray results, and when it is pushed forward a reduced spray is obtained. This is particularly desirable when its use is required near a sidewalk, so that the sprinkler may operate without wetting the sidewalk. This sprinkler is made in iron with brass slide and thumb nut and nickel plated throughout. [W. D. Allen Manufacturing Co., Chicago.]



COMBINATION SPRINKLER.

## A FABRIC AND RUBBER HEEL.

MR. CHARLES C. BEEBE, of the B. & R. Rubber Co. (North Brookfield, Massachusetts), is the patentee of a heel or sole that certainly should wear. As shown in the illustration, there is



FABRIC FOR RUBBER HEEL.

almost as much fabric as rubber, the mass being built up of previously frictioned sheets of fabric, died out and cured in molds in the usual manner.

## "ADWEAR" DETACHABLE TREAD.

To safeguard against skidding as well as punctures is the purpose of the Adwear detachable tread, and when punctures are mentioned blowouts and rim cutting are included. When applied to a new tire the treads serve as a preventive of these disheartening happenings, and when put on a worn tire its weakness is strengthened and it is sustained for further use. This tread is made of thick, pliable, chrome leather, tanned by a special process, which prevents it from being affected by water. Its toughness, it is said, prevents it from shrinking or hardening under weather conditions. The Adwear steel rivets which stud these treads add to their durability. They are secured to the tire by two rows of patent, double clutch steel hooks which in turn are attached to an endless wire hoop of the strongest iron, along the inside of the tire. They are made in different sizes for all styles of tires. [The Adwear Auto Tire Sleeve Co., North Attleboro, Massachusetts.]



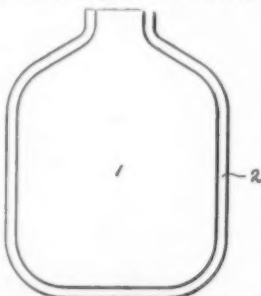
"ADWEAR" DETACHABLE TREAD.

## THE DE LONG RUBBER CORSET.

THIS is a new line of goods, covered by patents, the object of which is to reduce the form by stimulating perspiration and thereby reducing fatty tissue. It is pointed out that this induces the free and normal circulation of the blood, leaving the firm, healthy flesh in proper proportions to insure symmetry. [De Long Rubber Corset Co., No. 22 West Twenty-third street, New York.]

## NEW METHOD IN WATER BOTTLE MAKING.

ONE of the bright young men in the factory of The B. F. Goodrich Co. (Akron, Ohio) has patented a new process for seaming water bottles and fountain syringe bags. It is simply the dieing out of two sheets of stock, the shape of the bag, one a trifle smaller than the other, putting the lesser upon the greater, and folding and cementing the margin of the greater over the lesser. It looks practical. The inventor is Mr. I. F. Kepler, who has assigned his patent to the Goodrich company. One patent has been granted and others are pending.



NEW METHOD IN WATER BOTTLE MAKING.

## THE RUBBER TIRE FIELD.

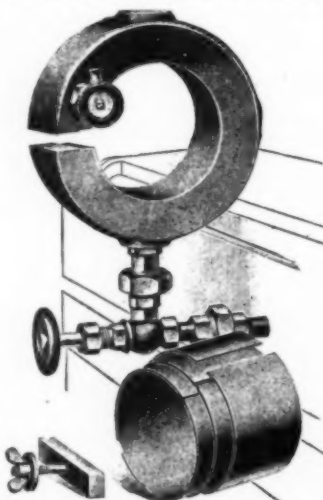
## NO SIDE FLANGES, NO WIRES.

AN exceedingly interesting tire is one that is soon to be put upon the market by several of the large tire manufacturers and is known as the American Cellular tire. No, it is not sponge-rubber, nor full of pneumatic pockets, nor inflatable rubber balls. It is a solid tire with a flat tread attached to a wheel rim upon which there are no flanges. Instead of retaining flanges there are two interior floating channels so arranged that the resilience of the whole of the tire is taken advantage of. With no base fabric, and no side flanges, the inventor claims that "with 60 per cent. of the usual mass he will carry twice the load" of any tire now in use.

The tires have been tested for some 4,000 miles on commercial vehicles, and on the rear wheels of a Royal Tourist automobile were run from Chicago to New York, the speed at times reaching 45 miles an hour. Of course experts will be slow to believe that anything but an air tire can satisfactorily do the work required by the pleasure vehicle. Leaving that type of vehicle out of the question, therefore, and concentrating on commercial sorts, it would seem as if a most valuable tire had been evolved. The officers of the American Cellular Tire Co., by the way, are men who have been long connected with the rubber trade.

## THE "H. F." JOINTLESS TUBE JOINER.

THE tube joints made with the use of the apparatus here illustrated are referred to as being so perfect that in every way the "joins" are invisible when finished. The process employed is described as being so thorough, and the whole treatment of so scientific a nature, that successful tube joining with this tool is assured. Every "join" so treated has the right proportionate strength and elasticity. Joints can be vulcanized completely under this process in 15 minutes. The illustration relates to a vulcanizing mold with interchangeable liners. The vulcanizer is marketed by Harvey Frost & Co., Limited, of London.



"H. F." JOINTLESS TUBE JOINER.

## SOLID RUBBER TIRES IN ENGLAND.

MENTION has been made already in these columns of the number of solid rubber tire forms listed by David Moseley & Sons, Limited, of Manchester, as compared with the few standard forms which are supplied in the United States. It is understood that they manufacture 160 different forms. On account of rubber carriage tires in America being molded, for the most part, so many different forms would hardly be practicable, on account of the expense of equipment, while at Manchester such tires are mostly machine made, which of course involves little extra expense for a new pattern.

## PNEUMATIC OR FLEWMATIC?

It is known as "pneumatic" and from the description is something of the glue and glycerine type that is pumped into the tire under pressure, and is supposed to be as resilient as air and much less likely to escape. When these tire fillers do escape, through overheating, it is not exactly pleasant for the bystanders, who are showered with the viscid mass, but perhaps "pneumatic" has never yet "flew."

## THE RUBBER TRADE AT TRENTON.

BY A RESIDENT CORRESPONDENT.

ACCORDING to statements made by some of the leading rubber manufacturers in Trenton the rubber trade outlook here, while not particularly rosy at present, seems likely to brighten up within the next few months. Most of the manufacturers take the view that the worst of the financial flurry is over and all that is needed now is a restoration of confidence to get business conditions back to the normal state. It is admitted that this cannot be accomplished all at once, but the general opinion among the Trenton manufacturers seems to be that the recuperating will come surely, though it may come somewhat slowly. By way of summing up a number of interviews it may be stated that the outlook for 1908 in Trenton is for a fair year's business, falling behind the big trade of 1906 and the first half of 1907 probably from 15 to 20 per cent. The Trenton factory owners are facing the situation courageously and are doing their best to aid in rebuilding general business confidence. None of the men interviewed ascribed any cause other than the general financial tightening, to the falling off in trade.

A. Boyd Cornell, secretary of the Empire Rubber Manufacturing Co., said: "While things are somewhat dull at present, we believe the general prospects are pretty good. We notice a gradual increase in orders, with no cancellations. We look for a good year, though of course not up to 1907."

Speaking for the Joseph Stokes Rubber Co., H. L. Boyer, general manager, said: "Business is not up to what it should be, but we consider the prospects fair. Dealers throughout the country seem to think the worst of the financial troubles are over. We are getting our share of business and we expect to see trade increase."

Horace M. Royal, of the Home Rubber Co., made this statement: "Prospects are brightening. We notice some improvement in business over that of the past few months. It is not rapid, but it is a gradual increase, and we look for it to continue until trade gets back to its normal level. Trade for 1908 will probably not rise to the standard of the past year or two, but we expect a fairly good year."

"Business is somewhat slack, but the indications are for better conditions," said John S. Broughton, secretary and general manager of the United and Globe Rubber Manufacturing Cos. Mr. Broughton said his factories were running full time, and in the mechanical line, particularly, he thought the prospects for a fair year were good.

William M. Blodgett, secretary and manager of the Hamilton Rubber Manufacturing Co., stated that this factory has orders ahead and none have been lost or cancelled. "We have considerable work on hand," he said, "but at present are running only nine hours as a precautionary measure. We expect to resume ten hours in a short time. Some of our hands are making full time. We regard the general outlook for the year as good."

Louis P. Destribats, factory manager of the Ajax-Grieb Rubber Co., said that while business was somewhat slack his company was hopeful that there would be an improvement soon and that the year would turn out a fairly good one.

William H. Harding, manager of the Union Rubber Co., said there was no good reason now for any continuance of the business slump. He asserted that if merchants and manufacturers would preach confidence good business times would return.

"We are busy," was the greeting of Harry E. Evans, manager of the Consolidated Rubber Co. Mr. Evans thought the business outlook was improving and that the year would yet turn out to be a good one.

\* \* \*

THE Ajax-Grieb Rubber Co. have their additional plant at Trenton under roof and good progress is being made with the

new buildings. The new plant is the result of the consolidation of the Ajax Standard Rubber Co., of New York, with the Grieb Rubber Co., of Trenton, and it is being erected on land acquired on the opposite side of Olden avenue from the old Grieb plant. The new structures are three in number and are solidly constructed of brick. The main building is three stories high and measures 150×60 feet. The curing department is one story, 150×60 feet, and the engine room is 110×40 feet. The new plant will be devoted largely to the manufacture of bicycle and automobile tires, while the old plant will continue to turn out mechanical goods and molded specialties. Much of the machinery is built ready for installation as soon as the buildings are completed. The plant will be operated by a Corliss engine of 700 HP. Among the new machinery will be 23 hydraulic presses. The new buildings will cost \$33,000.

\* \* \*

THE Home Rubber Co. have added a complete insulated wire manufacturing department to their factory. The new department has been installed in the present buildings, so that no addition was erected. The equipment is the best that could be procured and the installation was attended to with great care, thus placing the company in position to make high grade wire. The capacity of the new department is approximately 100,000 feet of wire a day. Insulated wire of all sizes is being made and all the wire turned out is in accordance with the terms of the "National electric code."

\* \* \*

SEVERAL Trenton rubber manufacturers were reelected directors of banks in that city at the annual meetings on January 14. Edmund D. Cook, of the Acme Rubber Manufacturing Co. of Trenton, was continued as a director of the Trenton Trust and Safe Deposit Co. and the Mercer Trust Co. John S. Broughton, secretary and general manager of the United and Globe, was reelected to the directorate of the Mercer Trust Co. Watson H. Linburg, one of the heads of the same company, was chosen again as a director of the First National Bank. A. Crozer Reeves, of the Standard Rubber Co., was continued as a director of the Broad Street National Bank.

\* \* \*

HARRY J. STOUT, the wealthy owner of three restaurants in Trenton and an enthusiastic automobilist, has devised a puncture proof appliance for tires. It consists of a series of laminated sections of thin spring brass, each curved to fit over the inner tube, and all attached to a strip of leather. The pieces of brass overlap each other like fish scales, and, being detached from each other, Mr. Stout claims that the appliance does not affect the resilience of a tire. It is placed between the inner tube and the shoe, and renders the tire puncture proof. Mr. Stout is testing the device on one of his autos, and after further tests states that he will arrange for its manufacture.

\* \* \*

THE United and Globe Rubber Manufacturing Cos. have added a new 500 HP. Corliss engine to their equipment.

William R. Thropp, manufacturer of rubber machinery, has erected an addition to his machine shops.

Andrew J. Berrien, who for many years has been head bookkeeper and estimator for William R. Thropp, manufacturer of rubber machinery, became receiver of taxes of Trenton on January 1. Mr. Berrien was elected for a term of three years.

Quartermaster General C. Edward Murray, of the Empire and Crescent rubber manufacturing companies, has been continued as treasurer of the Republican county committee for this year.

In addition to tires and tubes the Empire Automobile Tire Co. (Trenton, New Jersey), have added insulated wire to their line of products, particularly the "Empire" secondary wire for motor car use.

Mr. Burton R. Parker, formerly advertising manager of The Fisk Rubber Co., has been retained in a similar capacity by The Michelin Tire Co., with headquarters at Milltown.





FACTORY OF THE TYER RUBBER CO.—PORTION OF HARD RUBBER DEPARTMENT.

## The Remodelled Tyer Rubber Factory.

**T**HE Tyer Rubber Co., having recently rebuilt and enlarged their plant at Andover, Massachusetts, claim to have one of the most complete and up-to-date factories of any of its line in the world, and while comparisons are apt to be productive of feeling, their claim is strengthened whenever a visitor is taken over the works.

Beginning at the construction end, the buildings are of brick of mill construction, excellently lighted, four stories high, with a street frontage of 232 feet, extending back 256 feet, giving all told 160,000 square feet of floor space.

For equipment, there are two compound condensing engines of the Corliss type, which are 300 H.P. and 400 H.P. respectively, and these are considerably aided for producing more power by a large condensing pump which maintains 25" vacuum, together with a 45 foot cooling tower. In addition to the engines there are also electric motors for driving some subsidiary machinery and the lighting of the factory is furnished by three dynamos.

For boiler power, 600 H.P. is furnished by three Kendall boilers. A reinforced concrete coal pocket, with conveyor, stores the coal close to the fire room. Two cisterns, one with a capacity of 30,000 gallons, the other 90,000 gallons, insure abundant water. For fire, beside the sprinkler system, and the pleasant knowledge that they are protected from loss by The Rubber Manufacturers' Mutual Insurance Co., are two pumps with a capacity of 2,000 gallons per minute, and these, with their own factory brigade that drills every week, together with the regular town fire department, makes it possible to throw 18 streams at once.

From the engines the power goes to the machinery via a fine rope drive. The heavy machinery consists of 4 washers, 12 mixing mills, 3 calenders, 8 tubing machines, 35 dry tumbling barrels, and 3 wet tumbling barrels. Then there is the press room, comprising 17 large knuckle joint presses, by means of which countless molded and mechanical goods are manufactured.

Above the mill room is the cutting room, with its large assortment of dies used for cutting out various patterns to be made up into water bottles, fountain syringes, tobacco pouches, and the like. From the cutting room the visitor is led to the making-up

department, where are tables for 300 girls, occupying the whole second floor of one wing. For lighter power driven machinery, there are 27 hard rubber lathes and a score of buffing machines, two band cutters, dust presses, and many little special casting and finishing departments. To keep all these in repair requires a machine shop, and the visitor finds an excellently equipped one, not only for repair work but for making molds and similar work. In connection with the machine shop, there is a metal room for manufacturing metal pipes and fittings, demanded in the cheaper grade of druggists' sundries. Moreover in this same room are facilities for making up the hard rubber molds, lining bulb shells, and so on. The importance of this metal room is evidenced by the large room given up to it.

Among the most important considerations in a rubber factory are the vulcanizing facilities, and here The Tyer Rubber Co., with their new heaters, are amply provided. The equipment is made up of three bag and water bottle heaters, of 12, 14, and 25 feet, respectively; two hard rubber heaters, 12 and 21 feet, and capable of vulcanizing 18,000 pieces at a time; one bulb heater, 25 feet, with a capacity of 2,000 bulbs; and lastly an 18 foot tube heater. Also of importance are the hard rubber departments and cement dipped goods departments, the latter two occupying buildings detached from the main plant, which they might otherwise menace in case of fire.

The finishing or so called fitting room for assembling and boxing the finished products occupies a large space on the third floor and 75 girls or more are employed. This room has very adequate connection with the two shipping rooms below, by power elevators. Not the least interesting part of the factory is the well equipped laboratory which is under the direct charge of Mr. Henry G. Tyer, who took a chemical course at Harvard University expressly to carry on this work in the Tyer factory.

Of equal importance to this splendid equipment the factory has an efficient force of superintendents and foremen, making it possible to manufacture a line of goods that is known the world over—the "Tyrian"—and which are recognized by the trade as the highest quality of druggists' rubber goods.



FACTORY OF THE TYER RUBBER CO.—MAKING-UP ROOM IN DRUGGISTS' SUNDRIES DEPARTMENT.

## The Obituary Record.

### JULIUS W. BRUNN.

**J**ULIUS W. BRUNN, senior member of the firm of Hagemeyer & Brunn, of New York, died on December 30 at the age of 74.

Mr. Brunn was born in Hamburg, Germany, whence he came to New York, establishing himself in business as a commission merchant on August 3, 1858. On June 1, 1859, he associated himself with Mr. F. E. Hagemeyer, founding the firm of Hagemeyer & Brunn, in which he remained a member until his death. Although latterly he was not active in its management, he visited

the office almost daily.

The firm have been connected with the rubber import trade for about 20 years, since their friends, the import house of J. H. Andresen, of Oporto, Portugal, established a branch house in Manãos, which has lately been formed into the Sociedade Anonyme "Armazenas Andresen," now one of the most important houses on the Amazon and the



JULIUS W. BRUNN.

second largest receivers at Manãos. Hagemeyer & Brunn's first consignments they used to get from sailing vessels belonging to the Andresen fleet, plying between Portugal, Brazil, and New York. They further represent the well known Pará house of Pires Teixeira & Co., from whom they receive Islands qualities.

Besides his business activities Mr. Brunn was connected with some notable charitable institutions in New York city and held honorable positions with the German society and was long vice president of the German Savings Bank of New York. He belonged to the Lincoln Club of Brooklyn and was for 45 years a member of Plymouth church.

### ORLANDO C. SMITH.

**ORLANDO C. SMITH**, of Chicago, one of the most widely known shoe jobbers in the country, died in that city on December 27, in his seventy-first year. He was born at Randolph, New York, May 11, 1827, and removed at an early age with his parents to the northwest, where he became connected with the leather and shoe trades. Later he lived in Toledo, Ohio, where in 1865 he formed the firm of Smith & Simmons, remaining with it until 1890, when he accepted the executive management of Doggett, Basset & Hills Co., prominent shoe jobbers in Chicago, and moved to that city. Two years later the business was reorganized as the Smith - Wallace Shoe Co., with Mr. Smith as president.



ORLANDO C. SMITH.

Mr. Smith retired from active business in 1905, after having served for six successive terms as president of the Western Shoe

Wholesalers' Association. He was also at one time vice president of the National Shoe Wholesalers' Association of the United States. These positions brought Mr. Smith very prominently before the trade. As is well known, the existence of these associations is due largely to questions connected with the distribution of rubber footwear, a class of goods which Mr. Smith's own house handled very largely. The funeral at Toledo, Ohio, on December 29, was attended by many members of the trade from Chicago, and appropriate resolutions were adopted by the Western Association of Shoe Wholesalers.

#### DR. PETER T. AUSTEN.

PETER TOWNSEND AUSTEN, PH.D., one of the best known chemists in the United States, died suddenly at his home in New York on December 30, after an illness of several months, at the age of 55 years. After being graduated from the Columbia School of Mines in 1872, Mr. Austen went to Germany and studied for several years at the University of Berlin and with some eminent chemists. He was successively instructor of chemistry in Dartmouth College, professor of chemistry at Rutgers, and head of the chemistry department of the Brooklyn Institute. Later he devoted himself to consulting work with marked success. During his career he was called upon very often to solve problems connected with the rubber industry. Dr. Austen was a member of most of the important chemical societies of the world.

THE many friends in the trade, and out of the trade as well, of Mr. George E. Hall, general manager of the Boston Woven Hose and Rubber Co., will learn with deep regret of the death, on January 25, of his wife. The funeral occurred on Monday afternoon, January 27, at which time all the offices, jobbing houses, and the factory of the company were closed.

#### A STARTLING TIRE SUGGESTION.

THE newspapers *Le Matin*, of Paris, and the New York *Times*, which are responsible for the New York to Paris (via Alaska) automobile run, are giving much advice to contestants, as to clothing, equipment, and especially as to tires. One thing that both papers insist upon will fill the rubber trade with panic. To quote:

*"All pneumatics should be vulcanized in order to resist the great cold."*

No doubt the writer of these words was convinced that an automobile tire to stand an arctic climate should not be made by the ordinary process of melting the gum, pouring it upon the fabric, and blowing upon its surface until it hardened. He probably really believes that the invention of Goodyear that covered the use of sulphur and heat should now be employed. But does he appreciate what it costs to change processes in the great rubber factories of the world? To carry out his suggestion, the melting pots must be cast aside and each factory must become equipped with washers, dryers, mixers, calenders, making up forms, and last of all, expensive vulcanizers or presses—an investment of hundreds of thousands of dollars.

And just to cross Alaska and Siberia! It would hardly seem worth the while. The tires now in use, which by his inference are unvulcanized, are good enough. But vulcanized tires—absurd.

#### TIRE CHAINS VERSUS STUDS.

THE new regulation in New York, prohibiting the use of tire chains on automobiles going through any of the city parks or over any roads under the control of the park commissioners, called forth an exceptional number of complaints during the recent heavy snowfall. Not a few experienced drivers and professional chauffeurs declare that steel studded tire casings are not as good for running through heavy snow as tire chains

are, though many of them consider that the steel studs, especially those on foreign tires, are all right for preventing skidding on icy or slippery pavements.

When running through snow with steel studded tire casings the snow generally cakes between the studs, so that after a time the tread practically becomes a smooth one on account of the caked snow and ice which surrounds the studs. With tire chains this is impossible, as there is too much space between the chains that span the tires. The tire chains are much better for driving through snow, as they grip the snow at the sides of the tire as well as where the tire rests on the surface of the ground.

#### NINE YEARS OF AUTOMOBILE PROGRESS.

IT is just nine years since THE INDIA RUBBER WORLD, in connection with an effort to keep its readers informed in regard to the development of the then new automobile interest, printed a communication from a firm mentioned at the time as "one of the most important companies in the field," who wrote that "it would not be an extravagant estimate to say that probably 200 more vehicles, similar to those now in use [in New York city] will be constructed this year." The letter referred to closed with these words:

It is perfectly safe to assume that the motor vehicle industry has come to stay and that, while its development will be slow at first, it will increase with gigantic strides, and evidently to the great advantage of the rubber business.

Whether or not the motor vehicle industry "has come to stay," no one will dispute that it has increased "with gigantic strides," and "evidently to the great advantage of the rubber business." It must be admitted, however, that THE INDIA RUBBER WORLD's informants in 1899 were more successful as prophets than in the industrial field, as they long ago ceased to figure in the automobile world.

It may not be out of the way here to add that when, during the latter part of 1899, a member of THE INDIA RUBBER WORLD staff was in Germany, the director of one of the largest rubber manufacturing companies in that country assured him: "We don't believe that the future of the automobile industry will be of much interest to the German rubber trade. Perhaps the commercial motor vehicle will become important and this may call for solid rubber tires somewhat, but we cannot see any prospective large demand for rubber tires of any class for pleasure vehicles of the self propelling type." It may be added that the company whose director is quoted here have now become very important producers of pneumatic tires for vehicles, for both the domestic and export trade. Not only this, but Germany to-day is manufacturing the *Personenmotorwagen* in large numbers, not only for home use, but likewise for export to North and South America, every country in Europe, and to Asia and Africa.

#### RUBBER MONOPOLY IN NICARAGUA.

THE organization is reported of the Atlantic Industrial Co., with headquarters at Managua, Nicaragua, with a capital of \$300,000 (gold), to control the extraction of rubber from the government forests in that republic. The new company will operate under lease certain concessions granted by the government to a number of individuals in the past. The rubber collected under these concessions is exported mainly through San Juan del Norte, and the United States consul at that port estimates that the quantity will reach 500,000 pounds this year.

THE president of Brazil has signed a decree authorizing the operation in that republic of the \$11,000,000 company incorporated in Maine (United States) to construct the proposed Madeira-Mamoré railway. Alexander Mackenzie is the accredited representative of the company in Brazil.



## THE RUBBER TRADE AT SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

ONE of the good indications that point to a good year for the rubber business on the Pacific coast is the manner in which the season's rains are coming. It is not a flood of rain for one week and then two or three weeks without a drop, but there is a rain every week, and of the gentle and continuing kind, that does real good. Throughout the country districts the hopes of the farmers have been raised and they are looking forward to a favorable year, and the merchants in the interior towns, encouraged by the confidence of the farmers, are beginning to make purchases, whereas heretofore they have been letting their stocks run very low. The rubber establishments in San Francisco have been to a large extent holding their traveling men back during the quiet times, but those who have sent their men out through the interior are getting good results. From points as far south as Los Angeles, through the northern sections of the coast territory merchants are getting more liberal in their orders and show signs of getting back to their old buying capacity. In San Francisco the report from all of the rubber houses is that judging from all indications, business conditions will be normal again in a month or two. Collections are still quiet in some lines, but as a general rule they are getting easier every week.

The branch establishment of the Revere Rubber Co. (Boston) in San Francisco, located on Mission street, between First and Second, was destroyed by fire a fortnight ago, and the stock consumed. The stock, however, was covered by insurance. Telegrams were in at headquarters for stock to take the place of that destroyed as soon as the fire was over, and Mr. A. T. Dunbar, the local agent, was soon ready to receive it and go on with business at a location which he has taken at No. 507 Mission street. This firm has been doing a very active business on the coast.

The Pacific Coast Rubber Co. are moving from the temporary quarters in which they have been compelled to do business since the big fire, to their new quarters at No. 416 Mission street, in a massive reinforced concrete building just completed. The new store has a large balcony running around both sides, and in front the office fixtures have been built with elaborate finish and beauty. It is noticeable that the rubber merchants, as other merchants in San Francisco, in spite of the talk of quiet times and adversity, are all moving into more elaborate and more substantial quarters than they occupied before the fire.

Barton-Squires-Byrne, Inc., report that they have just received their two additional hydraulic presses and rubber mill machinery and are now installing it, and will soon have that new part of the plant in active operation. R. J. McNeilly, sales manager, reports that market conditions are showing gradual improvement, and the outlook is good.

The Gorham Rubber Co. have everything in running order now at the big new store on Fremont street, between Market and Mission, and all departments are reported to be busy. Mr. Gorham states that he expects trade to get back to about normal by next April. The outlook for a big business, he states, is excellent.

Mr. Grant, formerly with the Gorham Rubber Co., and more recently with the Pennsylvania Rubber Co., is back again with the Gorham.

The Sterling Rubber Co. report that business has so improved that it can be called good now, in comparison to what it was a month ago. Collections have greatly improved. Salesmen who have started through the interior of the state have been much encouraged by the good orders they have secured, and the trend seems to be for a gradual resumption of normal conditions.

L. L. Torrey, of the Pennsylvania Rubber Co., is satisfied with the way matters are developing in money and commercial matters on the coast. "People are a little more conservative than they used to be," he said, "but that is a good thing. Business is picking up and collections are getting better. Conditions are unquestionably improving."

R. H. Pease, of the Goodyear Rubber Co., reports cheerfully on the general conditions for the rubber business. "We enjoyed a successful business for last year," he said. "It was one of the best years in our business. We expect to get into the new building which we are erecting some time in May. That will place us in the same location which we have occupied for nearly 40 years." Mr. Pease will go to Portland to visit the northern branch for some 10 days, and after his return, about the middle of February, will go on to New York.

Both Mr. Kanzee and Mr. Ralph, of the Phoenix Rubber Co., report that the rubber business is showing steady improvement and that although it is still quiet as a result of the money scare, improvement is noticeable everywhere.

## POPULARITY OF THE RUBBER PEDAL.

WHILE it is hardly likely that the rubber pedal will oust its old rival, the "rat trap," as it once was ousted, that it is due for a considerable measure of renewed popularity appears certain. It is due to the demand of the motorcyclists that the rubber pedal has made its reappearance and that it has met with a warm and general welcome is evident. Practically every motorcycle manufacturer has been quick to adopt it. There also already has developed an appreciable demand on the part of riders of motorless bicycles and it is reasonable to suppose that this demand will be enlarged with the return of the outdoor season.

Abroad the rubber pedal never lost its vogue and its extinction in this country was largely assisted by the craze for lightness. The rat trap has obtained a hold that is too secure to be easily shaken, but granted only that the rubber blocks are not too small or too hard, there are those who will find in the rubber pedal a grateful comfort that is not to be denied and that will add somewhat to the pleasure of cycling. He is a wise dealer who stocks a few pairs of the pedals and calls the attention of his patrons to them.—*The Bicycling World*.

## BORING IN THE EARTH FOR RUBBER.

THE commissioner of public works of Tacoma, Washington, according to the local newspapers, believes there has been something akin to an india-rubber tree forest buried 200 to 300 feet below the surface of the earth on the wide stretch of prairie land south of that city.

The force of men who are boring a 1,000 foot well for the city have run into this rubber-like stratum of earth, and the commissioner has gone out to the well several times to investigate the formation. The earth, or mud, it is asserted by local authorities, is black in color and of the consistency of gluey rubber before it is tempered for commercial purposes. It will stretch with about an equal elasticity of crude rubber, and it is a hard task to punch a hole through or cut it.

For weeks it has been the despair of the well borers, as the sugar would scarcely make an impression upon it, and kept "slogging." The commissioner believes it may be a vegetable formation commingled with silt washed down by rivers to some prehistoric sea, which aeons ago was covered through some subterranean cataclysm by the gravel and sand composing the prairies.

THE electrical equipment of the *Mauretania*, the newest ship of the Cunard line, embraces nearly 100 tons of insulated wires, with a length of some 250 miles.

## RUBBER PLANTATION TOPICS.

## HOW WIDE APART TO PLANT?

THE subject of wide versus close planting of *Hevea* rubber in the Far East continues to be discussed in *The Financier* (London). It may be, says our contemporary, that in parts of Ceylon and Malaya *Hevea Brasiliensis* will mature on the lines of the giant forest trees found in the Amazon basin, while in other districts development may (from causes of which little or no knowledge now exists) develop sufficient dimensions to admit of successful tapping, and fail, after say 10 or 12 years, to increase to any great extent in girth.

In other words, a new variety of *Hevea*, peculiar to certain districts in the East, may be evolved, which, while yielding a few pounds of good rubber each year, will cease to increase in size to an extent, at any rate, which would not only render planting up to 180 trees to the acre permissible, but, from the profit earning point of view, eminently desirable. But if the *Hevea* retains in the East all of its characteristics in the Amazon valley, it is not easy to see how the close planting theory will work out profitably in practice.

Many of the most experienced planters, says *The Financier*, are now advocates of wide, or, at any rate, less close planting, and their change of opinion has not been brought about by any other means than a study of the conditions which are likely to achieve the best results from their labors. *Hevea* trees planted  $24 \times 20$  feet, or even  $20 \times 17$  feet, have, as Mr. Carruthers pointed out in his 1906 report on Federated Malay States agriculture, chances which are denied those planted  $15 \times 15$  feet or closer. They are bound to get the benefit of sunlight all over the ground; when matured they are easier to work; and at all times the dangers from disease are lessened.

On the whole, there seems very little to be said in favor of close planting, for even if the trees, as already suggested, might prove in some districts to be permanently smaller than those on the Amazon, the increased ease in working the avenue system and decreased risk from loss through disease are at least two factors which seem to *The Financier's* writer of outstanding importance.

## PRICES OF PLANTING SHARES.

In reporting on the rubber plantation share market for 1907, J. Russell Grant & Co. (London) say that it was only natural that prices of shares should have shrunk toward the end of the year, with the decline in the selling prices of rubber. The marvel, they say, is not that share values should have fallen, but that they did not go lower. They regard current prices as justified, however, and remark: "With rubber at 2 shillings per pound practically all the wild rubber at present available would be sold at a heavy loss, while plantation rubber could be sold at a very considerable profit."

## THE COMING LONDON RUBBER EXHIBITION.

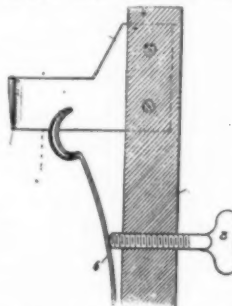
A PRELIMINARY prospectus has been issued of a Rubber and Allied Trades' Exhibition, to be held in London on September 21-26 next. The object is to direct attention to the great advances made in recent years in the various branches of the rubber interest, and of enabling the planter and dealer in the raw product to coöperate with the manufacturer in this projected education of the public. Provision will be made for the exhibition of raw rubber of every kind—even the so-called rubber product of the Colorado "rabbit weed"—and by means of lectures those who attend the exhibition will be given an idea of the difference between the various sorts and the distinctive qualities of each. Incidentally all the mechanical and other appliances for the preparation of crude rubber, whether on plantations or in the forest, will be on exhibition, and their uses explained. The machines and apparatus used in the rubber factory likewise will be shown, together with an extensive collection of manufactured goods into which rubber enters. The catalogue of intended exhibits provides for "india-rubber substitutes," and it is to be

hoped that a niche will be reserved also for "synthetic rubber"—if any can be found—in order that the public may have a fair opportunity to see how far their alarm at this bugaboo has been justified. The committees in charge embrace names identified with the rubber industry, planting, tropic commerce, colonial development, and so on—a list which guarantees the *bona fides* of the undertaking. The organizing manager is A. Staines Manders, 75 Chancery lane, Holborn, W. C., London.

## TWO NEW RUBBER TAPPING TOOLS.

WHAT is said to be the best tool yet for tapping the *Castilloa* rubber tree has been already described in *THE INDIA RUBBER*

WORLD (April 1, 1907—page 219). The cut used at that time, however, did not show the details satisfactorily. The present illustration, taken from the patent specifications, which shows all but the handle of the tool, is so self descriptive that it tells its own story. The knife is the invention of Mr. Charles A. Leshner, of La Zucualpa Rubber Plantation Co., in Mexico.



LESHNER'S TAPPING TOOL.

THE "Secure" rubber tapping knife is referred to as cutting either pulling or pushing, and as being capable of being adapted according to the thickness of the bark to be tapped. As will be seen from the illustration, the blade is joined to the circular base by means of a bolt, and fitted so as to



THE "SECURE" TAPPING KNIFE.

rotate in a slide to any angle required. The circular base and disc is toothed, and securely locks in any position. The pin has a square shoulder to prevent turning, and the shank is riveted in the handle.

## MALAYSIAN PLANTERS TO ECONOMIZE.

THE United Planters' Association in the Federated Malay States, which had contributed so much to the development of the rubber culture there, was formally dissolved at a meeting held at Kuala Lumpur on December 1, immediately after which a larger organization was formed, under the name Planters' Association of Malaya. It is intended to embrace members not only from the Federated States, but from the whole Malay peninsula. The headquarters and offices are to be at Kuala Lumpur. R. W. Harrison, chairman, and H. C. E. Zacharias, secretary, of the old association were elected to like positions in the new, to serve until the first annual meeting, in April. The association is expected to deal actively with the question of importing labor, and at the meeting above referred to it was pointed out that a necessary study was the reduction of plantation expenses. If rubber fell much lower the situation would be serious, for already the outcry at home [in England] against expenditure was extreme. Wages are higher in Malaya than Ceylon, one speaker claiming that the latter had an advantage of about 25 per cent. The meeting was attended by 30 planters, representing eleven local associations.

## RUBBER PLANTERS OF MEXICO.

MR. WILLIAM VERNON BACKUS, of Mexico City, who presided at the recent meeting at which was organized the Rubber Planters' Association of Mexico, and to whom was delegated the selection of a secretary, notifies the appointment of Mr. William A. Jones, of Mexico City, to that position. The first regular meeting of the association is scheduled for February 12.

## News of The American Rubber Goods Trade.

### UNITED STATES RUBBER CO.—DIVIDENDS.

THE board of directors of the United States Rubber Co., on January 2, declared the regular quarterly dividend of 2 per cent. upon the first preferred stock and the regular quarterly dividend of 1½ per cent. upon the second preferred stock, for the quarter beginning October 1, 1907, from the net earnings of the company for the fiscal year beginning April 1, 1907, the dividends being payable January 31, to shareholders of record January 15. The net earnings for the nine months (December partially estimated) are reported at approximately \$3,240,000, including dividends of \$583,108.75 received upon the stock of the Rubber Goods Manufacturing Co. in the company's treasury. The earnings reported for the corresponding period one year ago amounted to \$3,206,176, including \$552,247 of Rubber Goods dividends.

### GEORGE A. ALDEN & CO. REORGANIZED.

The copartnership existing between Messrs. George A. Alden, Adelbert H. Alden, and Arthur W. Stedman, under the firm name of George A. Alden & Co., in Boston, having expired by limitation on December 31, a new copartnership has been formed under the name and style of George A. Alden & Co., composed of Messrs. Adelbert H. Alden, Arthur W. Stedman, G. Edwin Alden, Fred W. Dunbar and J. Frank Dunbar, for the purpose of continuing the business. The present firm style was adopted in 1878, but the business of importing india-rubber was established by the late George A. Alden as early as 1855, and has been continued since without intermission. Adelbert H. Alden, a son of the founder, became a member of the firm in 1878; Mr. Stedman, after several years of connection with the house, became a partner in 1898; G. E. Alden is a younger son of the founder, and the Messrs. Dunbar have been employes of the house for a number of years.

### A RUBBER TIRE SUIT—DECISION AND APPEAL.

IN *re* Boston Woven Hose and Rubber Co. v. Pennsylvania Rubber Co., a suit for infringement of United States Patent No. 466,577 (for a pneumatic tire), issued January 5, 1892, to Frederick Schrader, of Philadelphia, in the United States circuit court for the district of Massachusetts, a decision has been filed in favor of the defendant. The Schrader patent, which was illustrated in THE INDIA RUBBER WORLD June 1, 1907 (page 290), will expire January 5, 1909. The court holds that the defendant is not using an invention made by Schrader and that Schrader did not anticipate in any degree the principle of the modern pneumatic ("clincher") tire. The decision in the above case was rendered by Judge Brown on November 14 last. Appeal papers have been prepared and the record on appeal entered in the United States circuit court of appeals on or about December 30, 1907.

### MATTSON RUBBER CO.—INCREASE OF CAPITAL.

THE Mattson Rubber Co., incorporated under the laws of New York, have increased their capital stock from \$100,000 to \$150,000, the increase being issued in preferred shares. The company during the past year bought an extensive plant at Lodi, New Jersey, and having ample facilities for enlarging their business it was decided to make this increase of capital in order to take advantage of them. It was understood that their business has been very prosperous notwithstanding the fact that they were considerably upset by their fire at Bellevilles in April last. In order to avoid a similar occurrence as much as possible a very complete automatic fire sprinkler system has been installed throughout their new plant and office buildings, together with other fire fighting appliances. The Mattson company make druggists' sundries.

### MR. ANDRUS LEAVES LA CROSSE.

MR. GEORGE S. ANDRUS, one of the founders of the La Crosse Rubber Mills Co. (La Crosse, Wisconsin) and from the beginning its general manager, has withdrawn from the company. Just what his plans are he does not divulge, except that before he takes hold of anything he is going to take a vacation, something that he has not done in ten years.

### LOANDO HARD RUBBER CO.—CHANGE OF NAME.

THE company at Boonton, New Jersey, which existed for a number of years as the Loando Hard Rubber Co. has been reorganized, involving a change of corporation style to Boonton Rubber Co. Charles Brock is president; R. A. Anthony, treasurer; and R. W. Seabury, secretary. A. Hall Berry is sales agent, with headquarters at No. 27 Warren street, New York, and a London office is maintained at 12 Manchester avenue, E. C. Besides continuing to make a high grade of reclaimed rubber suitable for hard rubber goods requiring a low ash test, the Boonton company make a full line of insulating materials.

### THE FISK RUBBER CO.'S ANNUAL.

THE annual meeting of shareholders of The Fisk Rubber Co. (Chicopee Falls, Massachusetts) was held on December 16, when the old board was continued in office, after which the officers of the company were reelected as follows: Harry T. Dunn, president; Harry G. Fisk, secretary; and Alfred N. Mayo, treasurer.

### THE PEERLESS COMPANY'S NEW YORK STORE.

THE Peerless Rubber Manufacturing Co. (New York) have recently opened their new retail department at No. 88 Chambers street, which connects with their long established store at No. 16 Warren street. Owing to their somewhat limited space they have not been able to carry a large stock, but with the additional store, they will always have on hand a full and complete line of mechanical rubber goods to fill immediate demands.

### THE "M. R." HYDROCARBON.

GEORGE A. ALDEN & Co. (Boston) are out with a circular letter in which they state in dignified terms their position as manufacturers and marketers of "M. R." hydrocarbon. In the first place they control the United States patents for its manufacture. The product is made from an exceedingly pure but intractable natural hydrocarbon of the elaterite series, for a long time useless because of its intractability, it was finally fluxed by the use of a special solvent, the base of which is heavy, high grade, Kansas oil. The discovery of this fluxing process is the subject of patents controlled by Messrs. Alden & Co. They made a contract with a certain company to manufacture this for a time, but at the expiration of that contract gave the work to another company. The quality of their M R has never been changed and they are the only company in the United States who are able to supply it.

### NEW INCORPORATIONS.

Two corporations formed December 27, 1907, under the laws of Massachusetts, are the Malden Rubber Co. and the Melrose Rubber Co., each with \$5000 capital, all issued for cash. The incorporators in each case are Major Harry P. Ballard (assistant treasurer of the Boston Rubber Shoe Co.); George L. Huntress, of Winchester, Mass.; and Charles E. Dow, of Boston. It is understood that the corporations will not be active but have been organized merely to protect certain trade names used by the Boston Rubber Shoe Co., and have been capitalized at the lowest figure possible under the Massachusetts laws.

Dissolvenc Co., December 24, 1907, under the laws of New York state; capital, \$10,000. Incorporators: Horace G. Stripe, No. 220 Broadway, New York; Paul C. Haan, Midland Park, New Jersey; and Lilian L. Steurer, Brooklyn, N. Y. To con-



tinue the business of dealing in rubber garments for reducing flesh, and various toilet articles.

The Eastern Flexible Conduit Co., September 21, 1907, under the laws of New York; capital \$20,000. To manufacture and sell flexible conduits, rubber tape, and pitch tape. Directors: Eugene T. Trotter (No. 276 Quincy street), A. P. Hinsky, and S. H. Smith, all of Brooklyn, N. Y.

National Waterproof Co., December 6, 1907, under the laws of Illinois; capital \$250,000. Incorporators: J. A. Kemper, Frank A. T. Trotter, and P. E. Coate. Business office stated: 1129 First National Bank building, Chicago.

Congo Brazilian Crude Rubber Co., December 17, 1907, under the laws of New Jersey; authorized capital \$500,000. Incorporators: Charles N. King, Jr., George H. Russell, and Frank A. Van Winkle. Principal office in New Jersey, No. 243 Washington street, Jersey City, N. J., and the agent in charge, New Jersey Corporations Agency.

The Solvini Auto Horn and Tubing Co., December 19, 1907, under the laws of New York; capital \$30,000. Incorporators: Salvatore Solvini, No. 402 East One Hundred and Sixteenth street, New York; G. Brunelli, New York, and A. Casazza, Brooklyn, N. Y.

Pneumatic Heel Cushion Co., January 11, 1908, under the laws of New Jersey; capital, \$100,000. Incorporators: William L. Gordon, Milan Ross, and Joseph G. Coleman, all of No. 213 First avenue, Asbury Park, N. J.

#### NEW ENGLAND RUBBER CLUB.

The New England Rubber Club are to be congratulated upon having secured Governor Hughes, of New York state, as a speaker at their next dinner. The date, March 10, is a little late, but the distinguished visitor's list of dates was full, and overfull, up to that time. The members of the Club have to thank Mr. E. E. Wadbrook for his faith that Governor Hughes could be induced to attend, if only the invitation was extended in a convincing manner. He therefore journeyed to Albany, interviewed the governor, incidentally becoming an admiring "Hughes man," and succeeded.

#### TRADE NEWS NOTES.

The Hartford Rubber Works Co. have discontinued their New York branch at No. 88 Chambers street, and will concentrate their business in this city at their more recently organized branch at Broadway and Fifty-seventh street. Hartford goods will be kept in stock downtown, however, by Charles E. Miller, at No. 97 Reade street.

The Sweet Tire and Rubber Co. (Batavia, New York), who have been engaged hitherto in making solid tires, are reported to be installing a plant for the manufacture of pneumatic tires for bicycles and automobiles.

Edward A. Rickitts, many years ago superintendent of the Davidson Rubber Co. (Charlestown, Massachusetts), has returned to his first love and is again superintendent of the same factory.

The Sterling Manufacturing Co. (Gloucester, Massachusetts) are putting on the market three grades of substitutes, samples of which sent to THE INDIA RUBBER WORLD office appear to be excellent. They sell by number, No. 2 being used in mold work, No. 10 in carriage cloth, and No. 67 in proofing.

Mr. Arthur E. Friswell, who recently returned from England on account of the death of his father, has determined to remain in America in connection with the settlement of the latter's estate. Mr. Friswell has made an exceptional record in the rubber tire industry. He was first with the Mechanical Fabric Co., going to the Hartford Rubber Works Co. when they took over the Fabric company's tire department. Later Mr. Friswell became connected with Messrs. David Moseley & Sons, Limited, of Manchester, England, where it is understood he did remarkably good work in the tire branch.

#### THE RUBBER TRADE IN CANADA.

For the past two months weather conditions in the Dominion have been such as to encourage both wholesalers and retailers of rubber footwear. Manufacturers have been kept fairly busy, and in some cases behind in their orders. The winter began with a heavy fall of snow, which was favorable to the rubber trade, and the mild weather which set in accompanied with showery periods proved no less so. *The Canadian Shoe and Leather Journal* points out that whereas many retailers find their rubber trade profitable, there are large numbers who still seem to regard the sale of rubbers as a side issue and who use cheap prices in this line as the means of advertising their general business. In some towns a fixed price list has been adhered to throughout the season with reported satisfactory results.

Fisk Limited (Montreal, Quebec), manufacturers of leather and shoe goods, and who have a rubber cement factory at Lachine, are understood to have an excellent business in the latter line, with a very encouraging outlook for the coming year.

The Canadian Boomer & Boschert Press Co. are turning out at their plant in Montreal a full line of presses, such as are made by the present concern at Syracuse, New York, including the designs intended especially for rubber factory use.

#### TRADE NEWS NOTES.

The Viscoloid Co., whose office and factory are in Lancaster street, Leominster, Massachusetts, manufacture a composition which they call "Viscoloid" and describe as being a material similar to celluloid.

The Wire and Telephone Co. of America (Rome, New York) have appointed the Besco Supply Co., of Birmingham, Alabama, their agents for the South, and supplied them with a stock of bare and rubber covered wires and telephone apparatus.

The annual meeting of The Middle States Shoe Wholesalers' Association is scheduled for Philadelphia on February 20.

A note in a local newspaper regarding the intended removal of the factory of the Bourn Rubber Co. (Providence, Rhode Island), related only to a small building at Cranston used by the company for making oil varnish, at some distance from the regular plant, as is the rule with most of the rubber factories.

The Eureka Fire Hose Co. (No. 13 Barclay street, New York), advise that Mr. Henry H. Cypher has severed his connection with them.

The employees of the B. & R. Rubber Co. (Northfield, Massachusetts), have organized the "B. & R." hose company, which has been supplied with equipment for protecting the plant against fire.

At the annual meeting of the New England Shoe Wholesalers' Association, held in Boston on December 11, the following officers were elected: George T. Howard (Batchelder & Lincoln Co., Boston), president; William A. Pickett (Hosmer-Codding Co., Boston), vice president and treasurer. George C. Houghton, No. 166 Essex street, Boston, was reelected secretary. The executive committee consists of Messrs. Howard and Pickett; A. S. Foster and W. F. Mayo, of Boston; and C. A. Blodgett, Springfield, Mass.

Alexander Macpherson has retired from the position of manager of the mechanical goods department of The Gutta Percha and Rubber Manufacturing Co., of Toronto, Limited, which he had filled for a number of years.

Mr. Frederick W. Dunbar, vice president of the New York Commercial Co., has been elected a director of the Aetna National Bank of New York.

The Waterbury Co. (of New Jersey), the regular quarterly dividend of 2 per cent. on the preferred shares and a quarterly dividend of 1¼ per cent. on the common, payable February 1. The Waterbury Co. (of West Virginia) a quarterly dividend of one-half of 1 per cent., on February 1.

## UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for four weeks, ending January 25:

## COMMON STOCK.

Week	Dec. 28	Sales 710 shares	High 21	Low 20
Week	Jan. 4	Sales 1,310 shares	High 20 $\frac{3}{4}$	Low 20
Week	Jan. 11	Sales 5,050 shares	High 24 $\frac{3}{4}$	Low 21
Week	Jan. 18	Sales 3,345 shares	High 26	Low 23
Week	Jan. 25	Sales 1,810 shares	High 24	Low 22

For the year—High, 26, Jan. 14; Low, 20, Jan. 2.  
Last year—High, 52 $\frac{3}{4}$ ; Low, 13 $\frac{1}{4}$ .  
Sales during 1907—175,277 shares.

## FIRST PREFERRED STOCK.

Week	Dec. 28	Sales 510 shares	High 77 $\frac{1}{2}$	Low 74 $\frac{1}{2}$
Week	Jan. 4	Sales 658 shares	High 79 $\frac{1}{2}$	Low 77
Week	Jan. 11	Sales 3,940 shares	High 88 $\frac{1}{2}$	Low 80
Week	Jan. 18	Sales 2,804 shares	High 88 $\frac{1}{2}$	Low 83
Week	Jan. 25	Sales 1,475 shares	High 82	Low 80

For the year—High, 88 $\frac{1}{2}$ , Jan. 9; Low, 77, Jan. 2.  
Last year—High, 109 $\frac{1}{2}$ ; Low, 61 $\frac{1}{4}$ .  
Sales during 1907—120,108 shares.

## SECOND PREFERRED STOCK.

Week	Dec. 28	Sales 10 shares	High 50	Low 50
Week	Jan. 4	Sales 460 shares	High 49 $\frac{1}{4}$	Low 46 $\frac{1}{2}$
Week	Jan. 11	Sales 2,340 shares	High 60	Low 49 $\frac{3}{8}$
Week	Jan. 18	Sales 320 shares	High 60	Low 59
Week	Jan. 25	Sales 100 shares	High 61 $\frac{1}{4}$	Low 61 $\frac{1}{4}$

For the year—High, 61 $\frac{1}{4}$ , Jan. 23; Low, 46 $\frac{1}{2}$ , Jan. 2.  
Last year—High, 78 $\frac{1}{4}$ ; Low, 39.  
Sales during 1907—31,203 shares.

## DIVIDENDS DECLARED.

AMERICAN Chiclé Co., regular quarterly dividend of 1 $\frac{1}{2}$  per cent. on the preferred stock, payable January 2; regular monthly dividend of 1 per cent. on the common stock, payable January 20; and a special dividend of 1 per cent. on January 20.

The United Shoe Machinery Co. paid on January 5 a dividend of 2 per cent. on their common and 1 $\frac{1}{2}$  per cent. on the preferred stock. The company have practically consolidated their manufacturing at the Beverly (Massachusetts) plant.

The fifth regular quarterly dividend of 1 $\frac{3}{4}$  per cent. on the preferred shares of the Canadian Consolidated Rubber Co., Limited, was payable January 1.

## EUREKA FIRE HOSE CO.—CHANGE OF NAME.

At a meeting of the shareholders of the Eureka Fire Hose Co. (New York), held on January 20, it was resolved unanimously to change the corporate name of the company to Eureka Fire Hose Manufacturing Co. The Eureka company was incorporated in 1875 and its development to its present very large dimensions has been a measure of progress generally in the art of fire hose manufacture.

## NEWS OF THE RUBBER SHOE FACTORIES.

WORK was resumed at the factory of the National India Rubber Co. (Bristol, Rhode Island), on Monday, January 6, after a shut-down lasting about three weeks. On the same date the boot factory of the Woonsocket Rubber Co. at Millville started work again. The company's "Alice" mill, at Woonsocket, has been running since December 30, having been closed only four days, for the holidays. It is reported that the Fells factory of the Boston Rubber Shoe Co., which has been closed since December, will reopen on February 3, and the factory of the Goodyear's Metallic Rubber Shoe Co., at Naugatuck, on February 10.

## MR. APSLEY ON BUSINESS CONDITIONS.

In an interview given to a local newspaper the Hon. L. D. Apsley, president of the Apsley Rubber Co. (Hudson, Massachusetts), said that when the company's plant was closed temporarily a few weeks ago, it was not on account of any pressing business condition, but as a precautionary measure. After an expose had been made of certain matters connected with the banking world, gossip about which had led to a shaking of confidence, the legitimate business of the country was found to be in an unusually sound condition.

"The Apsley Rubber Co.," said President Apsley, "has done the largest business during the past year that it has ever done. The profits have been remunerative, collections have been good and the losses have been absolutely little or nothing. A settlement of 60 per cent. on a bill of \$700 is all. This is most remarkable in doing business of between two and three millions, and I firmly believe that it reflects the sound condition of business houses generally throughout the country. Believing that the financial storm is blowing over and that conditions are as stated, we are again running on full time."

## 1908 CALENDARS RECEIVED.

A. ADAMSON, rubber machinery manufacturer (Akron, Ohio).—Calendar with reproduction of Blenner's painting of a lady, "In Maiden Meditation, Fancy Free."

Consumers' Rubber Co. (Bristol, Rhode Island).—Calendar with a picture of a girl, "Merry Christmas."

J. H. Stedman & Co., Inc. (Boston).—Calendar with large view of "The Old Town Mill" at New London, Conn., built in 1650.

The Stanford Rubber Supply Co. (Stamford, Connecticut).—Calendar with separate leaf for every day, with unusually large figures.

Eureka Fire Hose Manufacturing Co. (New York) send us a handsome calendar and a picture illustrating the importance of caring for fire hose.

Continental Rubber Works (Erie, Pennsylvania) have presented to their friends in the trade, as their 1908 picture, "Marguerite," a handsome copy on ivory board from a canvas of the celebrated American artist, Mr. W. H. McEntee.

## AFFAIRS OF THE ALADDIN RUBBER CO.

C. S. EDDY, receiver for The Aladdin Rubber Co. (Barberton, Ohio), has had the property appraised, with this result: Land and buildings, \$11,200; machinery and tools, \$18,127; scrap rubber stock, \$4,272.89; total \$33,399.89. The debts amount to about \$25,000, and the receiver thinks that if it is necessary to sell the property to satisfy the creditors, enough would be realized to pay 80 per cent. on the claims. But an attempt is being made to get the shareholders to pay an assessment in order to care for the indebtedness and avoid a sale and there is some prospect that this plan will succeed.

## TRADE NEWS NOTES.

THE Sunswick Co. (Astoria, New York), on January 25, made an assignment for the benefit of their creditors, to David Steward Bingham, No. 80 Broadway, New York. A meeting of creditors was to be held at that address on January 30 at 2 P. M. The Sunswick Co. are in the insulated wire trade.

E. Bers & Co., in the waste rubber trade in Philadelphia, have removed their offices to a new and superior location, No. 330 South Delaware avenue, adjoining their warehouses.

The Faultless Rubber Co. (Ashland, Ohio), have established a New York branch at No. 27 West Fourth street, where a complete stock of their products will be carried.

The American Agency for the Harburg and Vienna India-Rubber Co. (Vereinigte Gummiwaaren-Fabriken Harburg-Wien, Actiengesellschaft) has been taken by George Borgfeldt & Co., No. 48 West Fourth street, New York.

Charles J. Bailey, of C. J. Bailey & Co., rubber goods dealers, in Boylston street, Boston, and the inventor of the "Won't Slip" tire tread, sailed on January 21 for a six weeks' trip to Europe, where his house has extensive connections.

Mr. Joseph Thomas Hart, who has become general manager of the La Crosse Rubber Mills Co., came to that company in June, 1907, from Berlin, Ontario, where he had been superintending the Merchants Rubber Co. factory. Mr. Hart's father was a successful rubber factory superintendent, having been some time in the employ of the Goodyear India-Rubber Glove Manufacturing Co., and later of the Lycoming Rubber Co., at Williamsport, Pennsylvania.

**THE DIAMOND COMPANY'S WIRE DEPARTMENT.**

A FEW years ago, a very few in fact, when the Diamond Rubber Co. built a "saw toothed" building for housing the great vulcanizing department, which is such an important end of their tire equipment, the management thought that they had stopped building for a while. They were wrong, as is proved by the fine six story brick building that is now nearing completion and which is to be used chiefly for the manufacture of insulated wire. Five floors of this building, which is 240 feet long and 100 feet wide, will very shortly be filled with electrically operated machinery of the latest type for turning out electric wires and cables. As soon as this is thoroughly equipped the small insulated wire department, which for nearly a year has been run as a unit for training men and smoothing away minor difficulties of manufacture, will be consolidated with this, and then the Diamond will be heard of as one of the large producers of goods of this type. As the company does not need the whole building for the new product, the entire top floor will be turned into department for the manufacture of machine made hose of all kinds. This will not only relieve the much congested hose department now in use but will give one of the most comfortable and up-to-date arrangements that could be imagined.

**TRADE NEWS NOTES.**

THE G & J Tire Co. have discontinued their Boston branch, at No. 204 Columbus avenue, and turned over the New England agency for their tires to The Enterprise Rubber Co., of Boston, of which William E. Barker is president and treasurer.

The St. Louis Rubber Cement Co. have removed their New England office from Boston to Lynn, Massachusetts, where Manager W. O. Hadley is located in the Bergengren building.

There has been in progress for several days at the order of Mayor McClellan, of New York, an investigation as to the conditions under which fire hose is purchased for the city and the quality of the city's present supply of hose. On January 22 the fire commissioner made a request that the board of aldermen appropriate \$250,000 for a new fire hose, but the appropriation made was only \$50,000, the reason given being that it might be better to await the result of the investigation ordered by the mayor.

Morgan & Wright (Detroit, Michigan) have discontinued their branch at Cleveland, Ohio, after arranging with the Ohio Rubber Co., at No. 2048 East Ninth street, for the sale of their tires in that territory.

Revere Rubber Co. (Boston) announce a change of address of their Pittsburgh branch to 501 Hartje building.

The Massachusetts Chemical Co. (Walpole, Massachusetts), manufacturers of insulating tapes, varnishes, etc., are opening a branch office in Chicago, to be located at 464 Monadnock building. Mr. Arthur E. Duclos, well known to the electric trade in the middle West, will be in charge.

Pneumatic Heel Cushion Co., January 11, 1908, under the laws of New Jersey; capital authorized, \$100,000. Incorporators: William L. Gordon, Milan Ross, and Joseph G. Coleman, all of No. 213 First avenue, Asbury Park, N. J., where a factory will be located. Mr. Gordon is president of the company and Mr. Ross vice president and treasurer.

**PERSONAL MENTION.**

COLONEL SAMUEL P. COLT has resigned the presidency of the Industrial Trust Co., of Providence, the leading financial institution in Rhode Island and one of the most important in New England. Colonel Colt was the founder of the Industrial Trust and is understood to retain his property interest in it, his resignation as its head being due to the condition of his health and a desire for relief from some of the cares of business.

Dr. Alberto Pirelli, of Pirelli & Co., rubber manufacturers at Milan, Italy, has decided upon another visit to the United States, and is understood to be a passenger on the *Lusitania*, which sailed from Liverpool on January 25.

**NEW TRADE PUBLICATIONS.**

THE NEW JERSEY CAR SPRING AND RUBBER CO. (Jersey City, New Jersey) issue a new catalogue of Rubber Goods for mechanical purposes, beginning with hose for many purposes, followed by belting, valves, packing, mats, and a large number of other rubber items, and ending with various hose accessories. [4½" × 7". 132 pages.]

CLING-SURFACE CO. (Buffalo, New York) issue a booklet on "The Treatment of Belts and Ropes for Service and Profit," the purpose of which is to explain the use of "Cling-Surface," a preservative food for the treatment of rubber and other belts in order to get special results. [4½" × 7". 87 pages.]

STANLEY SUPPLY CO. (No. 38 East Twenty-first street, New York) issue a catalogue of Rubber Goods for Physician, Surgeon, and Hospital, which they supply from the best makers in this line. [3¾" × 6¾". 21 pages.]

ANDREW J. MORSE & SON, INC. (Boston) issue a catalogue of Fire Department Supplies, in great variety, including hose and all the standard accessories therefor. [5¼" × 7¾". 48 pages.]

**AN AERIAL PRESS ROOM.**

BECAUSE of their weight and the necessity for solid foundations, vulcanizing presses in rubber mills usually are set on the ground floor, and often in basements that are some feet below the ground level. Where only one or two presses are used this is all right, but where a battery of presses running into the hundreds is assembled, even in a high studded room, the floor of which is flush with the ground, the radiation is so great that there are times when the whole department will be shut down because the workmen are unable to stand the intense heat. This was the condition at the works of The B. F. Goodrich Co. (Akron, Ohio) in their small press department until very recently. Now, however, they have a department for small press work occupying the whole top floor of one of their new reinforced concrete buildings. With great windows on all sides so arranged that, no matter how hot the day or how constantly the presses are run, the workmen will always be comfortable. This press room, with its battery of 140 hydraulic presses between 60 and 70 feet in the air, is not only novel but thoroughly and wholesomely practical. It can now be run continually day and night if necessary, and with the amount of goods of this type that this company turns out it usually is necessary. As a bit of rubber engineering and an overcoming of difficulties in a revolutionary manner it is unique.

**THE NEW TAINTOR FACTORY.**

IT is now just about 18 years since THE INDIA RUBBER WORLD devoted an article of considerable length to the factory of The H. F. Taintor Manufacturing Co. (New York), who have become so well known as extensive manufacturers of whiting and paris white. The factory was at that time located in Brooklyn, under conditions then regarded as exceptionally favorable, and particularly as more convenient than the premises which had been used previously by the Taintor company. Business conditions change with time, however, and after occupying the Brooklyn plant for the long term of years above referred to, they have established themselves in an entirely different location, having erected and equipped a complete new factory at Bayonne, New Jersey. Here the same class of products as have made the name of Taintor so widely known will be produced under conditions even more favorable than in the past, while shipping facilities have been improved, and there is room for a long continued growth of the firm's business. The offices of the firm, however, remain unchanged—at No. 200 Water street, New York.



## Review of the Crude Rubber Market.

THERE has been no change in the conditions of the crude rubber market during the past month worth chronicling here. Quotations for Pará sorts, particularly, are lower than at the beginning of the month, but trading has been so inactive that prices named are little more than nominal, and have little bearing upon what market levels may be reached when consumers begin again to call for rubber more freely.

The production of rubber of all grades was larger during 1907 than for any former year, and, in view of the somewhat reduced consumption during the latter part of the year, visible supplies have increased materially. Meanwhile stocks in factories are believed to be much larger than for some years past, owing to the fact that with the beginning of the last marked decline large consumers placed orders in excess of their usual demands.

Should production continue at the present rate, it is likely to be some time before the normal relation between supply and demand is restored. There are indications, however, that present prices will lessen the activity of collectors of forest rubber, at least after the current season, just as the high prices for some years past have stimulated collection. All European authorities mention the decline of activity in the American trade as a feature of importance in the fall in prices of crude rubber, and in view of the recuperation from the recent business depression it seems to be taken for granted that the rubber industry will soon resume its wonted busy condition. This prediction doubtless is well founded, though the present "open" winter doubtless will have the effect of a reduced consumption of rubber for footwear in the coming business year. But as intimated above, an immediate increase in the manufacturing activity would not remove the stocks of rubber which have been accumulating for some months past, and which must be worked off before new rubber arriving will be in demand at higher than present rates.

Following are the quotations of New York for Pará grades one year ago, one month ago, and January 30—the current date:

PARÁ.	Feb. 1, '07.	Jan. 1, '08.	Jan. 30.
Islands, fine, new.....	118 @119	76@77	71@72
Islands, fine, old.....	none here	none here	none here
Upriver, fine, new.....	123 @124	82@83	74@75
Upriver, fine old.....	127 @128	84@85	75@76
Islands, coarse, new.....	72 @ 72½	50@51	45@46
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	97½@ 98	65@66	55@56
Upriver, coarse, old.....	none here	none here	none here
Caucho (Peruvian), sheet.....	78 @ 79	56@57	50@51
Caucho (Peruvian), ball.....	96 @ 97	65@66	55@56
Ceylon (Plantation) fine sheet.....	137 @138	95@96	89@90

### AFRICAN.

Sierra Leone, 1st quality.....	72@73	Lopori ball, prime.....	65@66
Massai, red.....	72@73	Lopori strip, prime.....	60@61
Benguella.....	48@49	Madagascar, pinky.....	64@65
Accra flake.....	12@13	Ikelemba.....	none here
Cameroon ball.....	47@48	Soudan niggers.....	65@66

### CENTRALS.

Esmeralda, sausage.....	56@57	Mexican, scrap.....	55@56
Guayaquil, strip.....	48@49	Mexican, slab.....	40@41
Nicaragua, scrap.....	55@56	Mangabeira, sheet.....	42@43
Panama.....	42@43	Guayule.....	29@30

### EAST INDIAN.

Assam.....	64@65	Borneo.....	31@32
------------	-------	-------------	-------

Late Pará cables quote:

	Per Kilo.		Per Kilo.
Islands, fine.....	3\$350	Upriver, fine.....	4\$100
Islands, coarse.....	2\$000	Upriver, coarse.....	3\$000
		Exchange.....	15 7/32d.

Latest Manãos advices:

Upriver, fine.....	4\$350	Exchange.....	15 3/16d.
Upriver, coarse.....	2\$350		

### Statistics of Para Rubber (Excluding Caucho).

	NEW YORK.		Total.	Total.	Total.
	Fine and Medium.	Coarse.	1907.	1906.	1905.
Stocks, November 30....Tons	70	65 =	135	98	154
Arrivals, December.....	794	284 =	1078	2136	1288
Aggregating.....	864	349 =	1213	2234	1442
Deliveries, December.....	779	320 =	1099	2058	1320
	85	29	114	176	122
	PARA.		ENGLAND.		
	1907.	1906.	1907.	1906.	1905.
Stocks, November 30....Tons	140	860	395	640	380
Arrivals, December.....	2285	2555	2985	1015	735
Aggregating.....	2425	3415	3380	1655	1115
Deliveries, December.....	2177	3415	2795	825	750
Stocks, December 31.....	248	....	585	830	365
World's visible supply, December 31....tons	2,484	1,978	2,589		
Pará receipts, July 1 to December 31.....	12,900	13,400	13,595		
Pará receipts of Caucho, same dates.....	1,340	1,205	1,035		
Afloat from Pará to United States, Dec. 31.	585	952	652		
Afloat from Pará to Europe, Dec. 31.....	707	485	660		

### MORSE'S STATISTICS OF NEW YORK ARRIVALS.

	1904.	1905.	1906.	1907.
Fine Pará.....tons	9526	8973	9959	10031
Coarse Pará.....	4841	4908	5160	5087
a Centrals.....	4052	4475	5884	7023
East India and Africa.....	9204	10279	8924	7292

Total.....27623 28635 29936 29433

a Including Caucho and Pernambuco.

### Statistics of Rubber Production.

	1907.	1906.
Vallambrosa Rubber Co.: April 1 to December 31.....pounds	164,795	99,258
Bukit Rajah Rubber Co.: April 1 to November 30.....	99,442	72,571
Consolidated Malay Rubber Co.: January 1 to December 31.....	65,590	32,693
Yatiantota (Ceylon) Tea Co.: January 1 to December 31.....	5,840	8,790

### Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for carload lots, per pound—have been about as follows, though a definite market can hardly be said to have been established as yet:

Old rubber boots and shoes—domestic.....	8¼@ 8½
Old rubber boots and shoes—foreign.....	7½@ 7¾
Pneumatic bicycle tires.....	6½@ 7
Automobile tires.....	7 @ 8
Solid rubber wagon and carriage tires.....	7 @ 8
White trimmed rubber.....	10½@ 11
Heavy black rubber.....	4 @ 4¼
Air brake hose.....	4¼@ 4½
Fire and large hose.....	3¾@ 3¼
Garden hose.....	2 @ 2¼
Matting.....	1½@ 1¾

In regard to the election of Mr. A. H. Alden, president of the New York Commercial Co., as vice president of the New York Produce Exchange Bank, after having been a director for several years, the *Mercantile and Financial Times* says that he is a business man of ability and sound experience, and that a better or more acceptable selection could not have been made.

**Plantation Rubber.**

THE first London auction for the year occurred on January 10, when the quantity of plantation sorts offered was the largest yet recorded. The quantity was  $11\frac{1}{2}$  tons from Ceylon and  $41\frac{3}{4}$  tons from Malaya—total,  $53\frac{1}{4}$  tons. Plantation kinds have declined recently at about the same proportion as Pará sorts, though for a few especially fine lots higher prices were realized. Hard fine Pará was quoted at 3s. 4d. and fine plantation sold at 3s. 8d. to 4s. 3d. At the corresponding sale last year plantation sold up to 5s. 9½d. During 1907, 814 tons of plantation rubber were offered at the London auctions, against  $348\frac{1}{2}$  tons in 1906.

Gow, Wilson & Stanton, Limited, report:

A feature that has lately been noticeable, and which was further emphasized at to-day's sale, was that the medium and lower grades of crepe were in more request than has been the case of late, and, compared with other grades, prices of these kinds showed some improvement. Unwashed scrap, where clean and free from bark, was also well competed for.

The exports of cultivated rubber from the Federated Malay States for the first eleven months of 1907 are officially reported:

From Perak .....	pounds 224,746
From Selangor .....	1,072,472
From Negri Sembilan .....	461,942

Total ..... 1,759,160

The exports of Pará rubber from the ports of Singapore and Penang from January 1 to November 30, which, by the way, do not correspond exactly with the above figures, were as follows:

POUNDS.		POUNDS.	
To Great Britain ...	1,367,334	To Australia .....	22,248
To Europe .....	154,000	To Ceylon .....	169,556
To United States ...	4,134		
To Japan .....	13,059	Total .....	1,730,331

[From Singapore, 1,268,330; from Penang, 462,001.]

At the above rate the complete shipments from the two Straits ports would reach 1,887,634 pounds, or about 800 English tons.

The latest advices from Ceylon permit the record of exports of cultivated rubber from that colony for 1907 to be brought down to December 23, which practically closes the year. A comparative statement by years would stand as follows:

1907 (to December 23) .....	pounds 506,373
1906 .....	327,024
1905 .....	168,247
1904 .....	72,040
1903 .....	41,684

**Destination of Exports, 1907.**

Great Britain .....	301,006	France .....	1,748
United States .....	170,974	Holland .....	151
Germany .....	15,501	India .....	112
Australia .....	11,034	Denmark .....	90
Belgium .....	5,634	Japan .....	33

The total shipment of Ceylon grown rubber for 1907 would appear to be about 226 English tons; the total including Malay States rubber was about 1,026 tons.

**Para.**

R. O. AHLERS & Co. reported [December 31] news from the Madeira and Juruá rivers that rubber gathering had been stopped on some *seringaes* and that the shipments of rubber from those regions were being withheld. "It is generally believed," they wrote, "that supplies will fall off considerably during the coming three months." Pará arrivals (including Caucho) for the crop season up to December 31 had totaled 14,240 tons, against 14,720 tons for the same period of last year and 14,699 tons for the six months ending December 31, 1905.

Messrs. Ahlers & Co. reported later [January 11]: "The feeling of anxiety about the near future of the rubber market during our months of principal receipts has been deepened still more by the fact that nearly all buyers for *sertao* (Upriver) have withdrawn their offers, thus apparently preparing a new drop in prices. Only small orders were filled at lower quotations, probably only to complete some previous orders for future delivery."

**PARA EXPORTS, JULY-DECEMBER, 1907.**

From Pará .....	kilos 6,478,741
From Itacatiara, direct .....	68,526
From Manãos, direct .....	5,912,120
From Iquitos, direct .....	1,489,267
Total .....	13,948,654

**Manaos.**

DURING November and five months of the crop season (including caucho), reported by Sociedade Anonyma Armazens Andresen:

FROM—	NOVEMBER.			JULY-NOVEMBER.		
	1907.	1906.	1905.	1907.	1906.	1905.
Rio Purús .....	502	666	483	3006	2368	2524
Rio Juruá .....	288	346	380	832	938	1078
Rio Madeira .....	283	364	339	1363	1601	1349
Rio Solimões .....	335	342	433	1557	1229	1208
Rio Negro .....	23	45	40	29	60	50
From Iquitos .....	366	426	279	880	1071	1047
Total .....	1799	2189	1954	7667	7267	7256

**MANAOS EXPORTS OF RUBBER, 1907.**

	New York.	Liverpool.	Continent.	Total.
Fine .....	4,399,265	3,598,746	2,514,470	10,332,481
Medium .....	1,049,064	705,626	201,033	1,955,723
Coarse .....	1,332,653	1,035,960	665,128	3,033,741
Caucho .....	1,087,336	2,394,126	1,121,262	4,602,724
Total .....	7,778,318	7,644,458	4,501,893	19,924,669

**Direct from Manaos to Hamburg.**

1902 .....	tons 104	1905 .....	tons 858
1903 .....	266	1906 .....	1,053
1904 .....	403	1907 .....	1,571

**New York.****NEW YORK RUBBER PRICES FOR DECEMBER (NEW RUBBER).**

	1907.	1906.	1905.
Upriver, fine .....	.82@ .86	1.22@ 1.24	1.23@ 1.29
Upriver, coarse .....	.66@ .72	.96@ .98	.90@ .97
Islands, fine .....	.72@ .79	1.18@ 1.20	1.20@ 1.26
Islands, coarse .....	.44@ .50	.71@ .73	.71@ .77
Cametá .....	.43@ .48	.72@ .74	.72@ .78

**SUMMARY OF PRICES FOR 1907.**

	UPRIVER.		ISLANDS.		CAMETA.
	FINE.	COARSE.	FINE.	COARSE.	
January .....	121@ 124	96@ 98	117@ 120	71@ 73	72@ 74
February .....	119@ 123	95@ 98	117@ 119	69@ 72	71@ 73
March .....	116@ 121	92@ 96	114@ 119	66@ 70	71@ 73
April .....	115@ 118	91@ 94	114@ 116	66@ 68	71@ 72
May .....	112@ 116	88@ 92	110@ 115	62@ 67	70@ 72
June .....	108@ 112	86@ 88	104@ 110	61@ 63	70@ 71
July .....	108@ 115	86@ 90	104@ 108	61@ 64	70@ 71
August .....	108@ 115	89@ 92	104@ 109	60@ 62	66@ 69
September .....	106@ 110	88@ 90	99@ 105	58@ 60	62@ 66
October .....	98@ 106	84@ 88	91@ 99	56@ 59	55@ 62
November .....	83@ 99	68@ 85	72@ 92	44@ 56	42@ 56
December .....	82@ 86	66@ 72	72@ 79	44@ 50	43@ 48

**Average Prices.**

1907 .....	109½	88	104½	61¾	65½
1906 .....	124½	93½	121	70	72¾
1905 .....	128½	93½	125½	72	74
1904 .....	113¼	87¼	110	65½	65½
1903 .....	94¾	76½	91¼	57¾	59¼
1902 .....	76	60¾	73	47¾	50½

**Liverpool.**

WILLIAM WRIGHT & Co. report [January 2]:

**Fine Para.**—Taking into account the strained financial situation, the market has on the whole been steady. Prices naturally have fluctuated, but only to a moderate extent, closing about ½d. per pound down from last month's final price. That financial conditions are improving in America is without doubt, but at the same time trade over there has had a severe "set back," and must take time to recover to normal requirements. If, as we are informed, American consumption is likely to be on a considerably reduced scale, then in view of the prospective heavy receipts up to March next, a further decline in values is more than likely. On the other hand, America has such wonderful recuperative powers that, once given financial confidence, a substantial increase in prices might easily accrue. The position is most uncertain, and consequently sellers are chary of selling far ahead, but on balance we are inclined to think that present rates are worth some attention by manufacturers.

# MASSACHUSETTS CHEMICAL CO.

WALPOLE, MASS., U. S. A.

Operate Walpole Rubber Works, Walpole Varnish Works.

RUBBER MANUFACTURERS CAN SAVE MONEY BY USING OUR

## No. 17 RUBBER FLUX No. 48

It permits additional compounding and puts old stocks in a merchantable condition

Our Flux is used extensively by wire manufacturers for slicking and weatherproofing. Write for prices and samples. We are the largest manufacturers of Friction Tapes in the world. If interested write us about Friction Tape and Cloth.



CHART SHOWING FLUCTUATIONS IN ISLANDS SPOT FINE PARA RUBBER AT NEW YORK, FOR THREE YEARS.

[Copyright, 1908, by Henry A. Gould.]

### Caucho From the Lower Amazon.

FORMERLY the supplies of caucho (known widely also as Peruvian rubber) shipped from Pará, had their origin solely in the upper Amazon regions. More recently, however, caucho

has been discovered in various parts of the state of Pará, on the lower Amazon, and is being collected in considerable quantities. Arrivals at Pará from the new sources during the last two crop years were (by rivers):

	Tocantins.	Amazon.	Xingu.	Total.
1905-06 .....	645	26	15	758
1906-07 .....	725	4	32	859

### Liverpool.

EDMUND SCHLUTER & Co. report [December 31]:

The year closes with an uncertain tendency. The explanation of the previous decline in the value of rubber still holds good, and with apparently plenty of rubber to come from the Amazon and a further increase from the East prices may not advance. On the other hand, our figures show that with approximately equal supplies we have had dearer prices than those ruling now, and a little more confidence in stability of money and credit may stimulate the demand.

### THE WORLD'S VISIBLE SUPPLY OF PARA, DECEMBER 31.

	1907.	1906.	1905.	1904.	1903.	1902.
Tons .....	3730	2754	2740	2648	3351	3395
Prices, hard line...	3/5	5/2½	5/5	5/1¼	3/11½	3/8

### LIVERPOOL STOCKS OF AFRICAN RUBBER, DECEMBER 31.

	1907.....	1904.....	1901.....	1900.....	1899.....
304	398	586	770	576	
282	255				
300	375				

### IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

JANUARY 2.—By the steamer		Madeirense, from Manáos and Pará:		Total.	
		Fine.	Medium.	Coarse.	Caucho.
A. T. Morse Co.....	87,900	11,200	66,600	300	166,000
C. P. dos Santos.....	96,000	13,900	31,700	....	141,600
New York Commercial Co....	63,100	10,800	20,900	5,100	99,900
Poel & Arnold.....	13,000	13,000	11,900	....	37,900
General Rubber Co.....	5,700	700	24,400	1,200	32,000
Hagemeyer & Brunn.....	5,300	....	9,200	....	14,500
Total .....	271,000	49,600	164,700	6,600	491,900
JANUARY 13.—By the steamer		Cearense from Manáos and Pará:		Total.	
		Fine.	Medium.	Coarse.	Caucho.
A. T. Morse & Co.....	148,800	25,700	64,500	....	239,000
General Rubber Co.....	98,000	10,900	32,000	46,700	187,600
Poel & Arnold.....	88,200	7,500	61,500	....	157,200
Edmund Reck & Co.....	80,700	9,300	99,700	6,900	196,600
C. P. dos Santos.....	14,800	2,100	18,500	400	35,800
Total .....	417,300	56,600	282,400	54,000	810,300

### CONSUMPTION OF INDIA-RUBBER BY THE UNITED STATES AND CANADA (IN TONS).

[From the Annual Statistical Summary of Albert T. Morse & Co., New York.]

DETAILS.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
Imports to United States.....	14643	16182	14333	17671	18620	23095	20468	23208	21842	24760	27623	28635	29936	29433
Exports to Europe.....	391	324	500	250	150	300	450	680	430	490	274	357	1625	558
Add Stock on January 1.....	14252	15858	13833	17421	18470	22795	20018	22528	21412	24270	27349	28278	28311	28875
	1037	1420	558	641	744	591	712	1198	1399	331	256	305	537	365
Less Stock close of year.....	15289	17278	14391	18062	19214	23386	20730	23726	22811	24601	27695	28583	28848	29240
	1420	558	641	744	591	712	1198	1399	331	256	305	537	365	606
Deliveries to Manufacturers....	13869	16720	13750	17318	18623	22674	19532	22327	22480	24345	27300	28046	28483	28634



# GUAYULE

WHEN PROPERLY CURED AND MIXED WITH OTHER COMPOUNDS  
**IS THE CHEAPEST RUBBER ON THE MARKET**

**There is As Much Difference Between the Various Brands of Guayule  
as Between Fine Para and Shoddy**

Guayule made from old, sun exposed shrub is **dead, dirty and sticky**, and no amount of washing will make it clean, while rubber made from freshly cut, selected shrub, has **life**, low percentage of resin and is practically clean.



has been on the market for several years and is known to be the best Guayule made as to life, strength, purity and low percentage of resin.

There is a large demand for a specially prepared Guayule, dry and ready for use, which we have met in



As this rubber is made exclusively from our high grade "Parra" Guayule, uniformity and absolute purity is guaranteed. No mixing in of cheap compounds to bring down the price. Durango rubber is nothing but Parra brand pure Guayule prepared so that anybody can use it.

**CONTRACTS MADE FOR REGULAR MONTHLY  
OR WEEKLY DELIVERIES**

For Samples and Quotations apply to

**ED. MAURER**

**97 Water St., NEW YORK**

**Sole Representative of the MADERO interests in Mexico,  
largest owners of Guayule**

## PARA I BER VIA EUROPE.

JAN. 4.—By the *Patricia*=Hamburg:  
W. L. Gough ..... 14,000

## OTHER NEW YORK ARRIVALS.

## CENTRALS.

DEC. 24.—By the *Siberia*=Columbian ports:  
Schulte & Goschen ..... 5,500  
Schulte & Ruckgaber ..... 3,500  
Columbian Trading Co. .... 2,500  
G. Amsinck & Co. .... 2,500  
Suzarte & Whitney ..... 1,500  
Jose Julia & Co. .... 1,000  
Aramburu Incorporated ..... 500 17,000

DEC. 26.—By the *Bayamo*=Tampico:  
Edward Maurer ..... \*44,500  
Poel & Arnold ..... \*22,500  
N. Y. Commercial Co. .... \*15,000  
E. Steiger & Co. .... \*4,500 \*86,500

DEC. 26.—By the *Momus*=New Orleans:  
Eggers & Heinlein ..... 1,000  
Fred Probst & Co. .... 1,000  
G. Amsinck & Co. .... 500  
A. Rosenthal Sons ..... 500 3,000

DEC. 26.—By the *La Plata*=Columbian ports:  
G. Amsinck & Co. .... 2,500  
A. Held ..... 1,000  
Roldau & Van Sickle ..... 1,000 4,500

DEC. 28.—By the *El Rio*=Galveston:  
Continental Mexican Rubber Co. .... \*45,000

DEC. 27.—By the *Panama*=Colon:  
Hinzel Fellman Co. .... 4,000  
A. Santos & Co. .... 3,500  
Isaac Brandon & Bros. .... 3,500  
Roldau & Van Sickle ..... 1,500  
A. M. Capens Sons ..... 1,000  
W. R. Grace & Co. .... 1,000  
G. Amsinck & Co. .... 1,000 15,550

DEC. 28.—By the *Merida*=Vera Cruz:  
Harburger & Stack ..... 3,000  
H. Marquardt & Co. .... 1,000 4,000

DEC. 30.—By the *El Dia*=New Orleans:  
G. Amsinck & Co. .... 5,000  
J. Julia & Co. .... 2,000  
Manhattan Rubber Mfg. Co. .... 1,500  
A. T. Morse & Co. .... 1,500 10,000

DEC. 31.—By the *Augustus Wilhelm*=Savanna:  
Schulte & Goschen ..... 5,500  
Mecke & Co. .... 500  
Seanz & Co. .... 500 6,500

JAN. 2.—By the *Dunottar*=Colon:  
Demarest Bros. Co. .... 5,500  
Piza, Nephews Co. .... 4,500  
A. Rosenthal Sons ..... 2,500  
A. Santos & Co. .... 2,000  
R. G. Barthold ..... 500 15,000

JAN. 4.—By the *Alorro Castle*=Frontera:  
Strube & Ulze ..... 3,000  
E. Steiger & Co. .... 1,500  
E. U. Tibbals & Co. .... 1,000  
H. Marquardt & Co. .... 1,000 6,500

JAN. 4.—By the *Graecia*=Colombia:  
G. Amsinck & Co. .... 2,500  
D. A. DeLima & Co. .... 2,000  
American Trading Co. .... 500 5,000

JAN. 6.—By the *Vigilancia*=Tampico:  
Edward Maurer ..... \*45,000  
Continental Mexican Co. .... \*45,000  
European account ..... \*55,000 \*145,000

JAN. 6.—By the *El Valle*=New Orleans:  
A. N. Rotholz ..... 2,500

JAN. 8.—By the *Finance*=Colon:  
G. Amsinck & Co. .... 4,500  
Mecke & Co. .... 1,000  
A. Santos & Co. .... 1,000 6,500

JAN. 9.—By the *Camaguey*=Tampico:  
New York Commercial Co. .... \*115,000  
Continental Mexican Co. .... \*45,000 \*160,000

JAN. 9.—By the *Tagus*=Columbian ports:  
D. A. DeLima & Co. .... 2,500  
A. Held ..... 2,000  
Schulte & Goschen ..... 1,500  
Graham & Hinkley Co. .... 500 6,500

JAN. 11.—By the *Mexico*=Frontera:  
Harburger & Stack ..... 4,500

JAN. 13.—By the *Colon*=Colon:  
G. Amsinck & Co. .... 18,500  
Demarest Bros. Co. .... 3,000  
A. Santos & Co. .... 2,000

## POUNDS.

L. Johnson & Co. .... 1,500  
Aramburu Incorporated ..... 2,500  
Andreas & Co. .... 1,500  
Eggers & Heinlein ..... 1,500  
R. G. Barthold ..... 500 31,000

JAN. 14.—By the *Creole*=New Orleans:  
A. N. Rotholz ..... 1,000  
A. T. Morse & Co. .... 1,000 2,000

JAN. 14.—By the *Joachim*=Columbian ports:  
Schulte & Goschen ..... 3,500  
Kunhardt & Co. .... 3,500  
G. Amsinck & Co. .... 2,500  
Cortes Commercial Co. .... 1,500  
Seanz & Co. .... 1,000  
United Fruit Co. .... 1,000 13,000

JAN. 15.—By the *Matanzas*=Tampico:  
Edward Maurer ..... \*45,000  
Remsch & Heide ..... \*22,500  
For European account ..... \*6,000 \*73,500

JAN. 16.—By the *El Rio*=Galveston:  
Continental Mexican Rubber Co. .... \*55,000

JAN. 18.—By the *Monterey*=Vera Cruz:  
H. Marquardt & Co. .... 1,500  
Schulte & Goschen ..... 1,000 2,500

JAN. 22.—By the *Sarnia*=Greystown:  
G. Amsinck & Co. .... 12,000  
Mecke & Co. .... 2,500  
Suzarte & Whitney ..... 2,500 17,000

JAN. 23.—By the *Antilles*=New Orleans:  
G. Amsinck & Co. .... 5,500

JAN. 31.—By the *Panama*=Colon:  
G. Amsinck & Co. .... 15,500  
Jose Julia & Co. .... 7,500  
Meyer Hecht ..... 2,000  
Hirzel, Feltman & Co. .... 2,000  
R. Fabien & Co. .... 1,000 28,000

JAN. 23.—By the *Bayamo*=Tampico:  
Edward Maurer ..... \*75,000  
New York Commercial Co. .... 6,000 \*81,000

\*This sign, in connection with imports of Centrals, denotes Guayule rubber.

## AFRICANS.

## POUNDS.

DEC. 27.—By the *Victorian*=Liverpool:  
Geo. A. Alden & Co. .... 20,000  
Poel & Arnold ..... 11,500 31,500

DEC. 27.—By the *Hermann*=Lisbon:  
Poel & Arnold ..... 22,500

DEC. 30.—By the *Campania*=Liverpool:  
George A. Alden & Co. .... 9,000  
Poel & Arnold ..... 9,000  
Rubber Trading Co. .... 5,500 23,500

DEC. 30.—By the *Pretoria*=Hamburg:  
General Rubber Co. .... 15,500  
A. T. Morse & Co. .... 22,500 38,000

DEC. 31.—By the *St. Laurent*=Havre:  
Poel & Arnold ..... 105,000

JAN. 2.—By the *Finland*=Antwerp:  
Poel & Arnold ..... 35,000  
A. T. Morse Co. .... 25,000  
Robinson Stiles ..... 11,000  
Joseph Cantor ..... 3,000  
Geo. A. Alden & Co. .... 2,500 76,500

JAN. 3.—By the *Celtic*=Liverpool:  
Livesey & Co. .... 9,000  
George A. Alden & Co. .... 7,000  
A. T. Morse & Co. .... 7,000 23,000

JAN. 4.—By the *Minnehaha*=London:  
W. L. Gough Co. .... 18,000

JAN. 4.—By the *Patricia*=Hamburg:  
Poel & Arnold ..... 9,000  
A. T. Morse & Co. .... 4,500  
General Rubber Co. .... 4,500  
W. L. Gough Co. .... 2,500 20,500

JAN. 9.—By the *Peninsular*=Lisbon:  
Poel & Arnold ..... 45,000

JAN. 10.—By the *Hudson*=Havre:  
Poel & Arnold ..... 45,000

JAN. 10.—By the *Lovstaken*=Lisbon:  
General Rubber Co. .... 60,000

JAN. 13.—By the *Carmania*=Liverpool:  
George A. Alden & Co. .... 14,000  
W. L. Gough Co. .... 2,500 16,500

JAN. 24.—By the *Georgic*=Liverpool:  
George A. Alden & Co. .... 11,500  
A. T. Morse & Co. .... 11,500  
Rubber Trading Co. .... 5,500 28,500

## EAST INDIAN.

## POUNDS.

DEC. 23.—By the *New York*=London:  
Robinson & Stiles ..... 3,000  
George A. Alden & Co. .... 1,500 \*4,500

DEC. 23.—By the *Stolzenfels*=Colombo:  
A. T. Morse & Co. .... \*12,500

DEC. 23.—By the *Indrawadi*=Singapore:  
Heabler & Co. .... 25,000  
W. L. Gough Co. .... 23,000  
George A. Alden & Co. .... 23,000  
Winter & Smillee ..... 11,000  
Poel & Arnold ..... 7,000 89,000

DEC. 24.—By the *Mesaba*=London:  
Robinson & Stiles ..... \*3,500

JAN. 3.—By the *Des Kelly*=Singapore:  
W. L. Gough Co. .... 25,000  
George A. Alden & Co. .... 23,000  
Heabler & Co. .... 10,000  
Poel & Arnold ..... 10,000 67,000

JAN. 4.—By the *Matappo*=Colombo:  
A. T. Morse & Co. .... \*11,500

JAN. 13.—By the *St. Paul*=London:  
A. T. Morse & Co. .... \*33,500  
Robinson & Stiles ..... \*2,500 \*36,000

JAN. 13.—By the *Headley*=Singapore:  
W. L. Gough Co. .... 20,000  
Poel & Arnold ..... 5,000  
Joseph Cantor ..... 5,000 30,000

JAN. 15.—By the *Monarch*=Singapore:  
Geo. A. Alden & Co. .... 20,000  
W. L. Gough Co. .... 15,000  
Joseph Cantor ..... 5,000 40,000

JAN. 16.—By the *Cestrian*=London:  
General Rubber Co. .... \*7,000

JAN. 18.—By the *African*=Colombo:  
A. T. Morse & Co. .... \*13,500

\*Denotes Plantation Rubber.

## GUTTA-JELUTONG.

DEC. 23.—By the *Indrawadi*=Singapore:  
Poel & Arnold ..... 255,000  
Heabler & Co. .... 460,000  
M. Joachemsens ..... 210,000  
W. L. Gough Co. .... 155,000  
J. W. Phylle & Co. .... 90,000  
George A. Alden & Co. .... 85,000  
H. Pauli ..... 20,000 1,245,000

JAN. 3.—By the *Des Kelly*=Singapore:  
M. Joachemsens ..... 475,000  
E. O. Bragdon Sons ..... 255,000  
Heabler & Co. .... 155,000  
W. L. Gough Co. .... 155,000  
Poel & Arnold ..... 90,000  
H. Pauli ..... 55,000 1,185,000

JAN. 13.—By the *Headley*=Singapore:  
Heabler & Co. .... 200,000  
M. Joachemsens ..... 155,000  
W. L. Gough Co. .... 155,000  
J. W. Phylle & Co. .... 55,000  
E. O. Bragdon Sons ..... 50,000  
Poel & Arnold ..... 50,000  
Joseph Cantor ..... 10,000  
H. Pauli ..... 10,000 730,000

JAN. 15.—By the *Monarch*=Singapore:  
M. Joachemsens ..... 220,000  
Heabler & Co. .... 100,000  
W. L. Gough Co. .... 100,000  
E. O. Bragdon & Sons ..... 55,000 475,000

## BALATA.

## POUNDS.

DEC. 28.—By the *Fredk. Hendrik*=Trinidad:  
Middleton & Co. .... 11,000

DEC. 30.—By the *Korona*=Demerara:  
George A. Alden & Co. .... 9,500

JAN. 10.—By the *Parima*=Demerara:  
George A. Alden & Co. .... 7,000

JAN. 17.—By the *Grenada*=Ciudad Bolivar:  
G. Amsinck & Co. .... 11,500

## CUSTOM HOUSE STATISTICS.

## PORT OF NEW YORK—DECEMBER.

Imports:	Pounds.	Value.
India-rubber .....	3,758,416	\$2,256,670
Balata .....	21,712	7,649
Gutta-percha .....	15,043	4,916
Gutta-jelutong .....	2,892,547	131,353
Total .....	6,687,718	\$2,400,588
Exports:		
India-rubber .....	127,567	\$91,445
Reclaimed rubber .....	37,449	5,437
Rubber Scrap Imported....	1,001,120	\$79,813



Vol. 37.

FEBRUARY 1, 1908.

No. 5.

## TABLE OF CONTENTS

	PAGE.
New York's Poor Fire Hose.....	137
Prices of Rubber and the Demand.....	138
The Condition of the Trade.....	138
Fighting Fires in "Skyscrapers".....	139
Cheaper "Chewing Rubber".....	139
Let Us Forget.....	139
<b>The Editor's Book Table.....</b>	<b>140</b>
<b>The Quality of New York City's Fire Hose.....</b>	<b>141</b>
<b>The India-Rubber Trade in Great Britain.....</b>	<b>143</b>
[Strength of Plantation Para Rubber, Scrap Rubber, Derma- tine Co., Limited, Merchandise Marks Act, Rubber Caps for Glass Jars, Rubber Tires in the British Army.]	
<b>The India-Rubber Industry in Japan.....</b>	<b>147</b>
<i>A Special Correspondent.</i>	
<b>Progress of Rubber Planting.....</b>	<b>148</b>
<b>Antwerp, Havre and Congo Rubber.....</b>	<b>149</b>
<b>The Manufacture of Balata Belting.....</b>	<b>150</b>
<i>A Special Correspondent.</i>	
<b>Recent Patents Relating to Rubber.....</b>	<b>152</b>
[United States, Great Britain, France.]	
<b>New Rubber Goods in the Market.....</b>	<b>155</b>
[Another "Stick Fast" Shoe, A Large Atomizer, Tire Case Luggage Carrier, Rubber Sponge Bath Mat and Bath Belt, "Easy Walker" Rubber Heel, "Combination" Lawn Sprink- ler, A Fabric and Rubber Heel, "Adwear" Detachable Tire, De Long Rubber Corset, New Method in Water Bottle Making.]	
[With 10 Illustrations.]	
<b>The Rubber Tire Field.....</b>	<b>156</b>
<b>The Remodelled Tyer Rubber Factory.....</b>	<b>158</b>
[With 2 Illustrations.]	
<b>The Obituary Record.....</b>	<b>159</b>
[With Portraits of Julius W. Brunn and Orlando C. Smith.]	
<b>Rubber Plantation Topics.....</b>	<b>162</b>
[With 2 Illustrations.]	
<b>Miscellaneous:</b>	
Electricity in Mexico.....	139
Exports from United States.....	139
Guayule Notes.....	142
Fire Hose Damaged by Acid.....	151
A Felt and Rubber Company in Canada (Illustrated).....	151
New Rubber Reclaiming Process.....	153
Tests of Non Deflation Tire Tubes.....	153
Three Head Rubber Covering Machine (Illustrated).....	154
Washing Rubber Goods (Illustrated).....	154
Beds for Ocean Cables.....	154
A Startling Tire Suggestion.....	160
Tire Chains Versus Studs.....	160
Nine Years of Automobile Progress.....	160
Rubber Monopoly in Nicaragua.....	160
Popularity of the Rubber Pedal.....	161
Boring in the Earth for Rubber.....	161
<b>News of the American Rubber Trade.....</b>	<b>163</b>
The Trade at Akron.....	Our Correspondent, 145
The Trade at Trenton.....	Our Correspondent, 157
The Trade at San Francisco.....	Our Correspondent, 161
<b>Review of the Crude Rubber Market.....</b>	<b>167</b>

## Antwerp.

## RUBBER STATISTICS FOR DECEMBER.

DETAILS.	1907.	1906.	1905.	1904.	1903.
Stocks, Nov. 30, bilos.....	1,015,284	714,919	635,296	611,726	680,142
Arrivals in December.....	219,544	636,469	474,173	581,844	638,158
Congo sorts.....	190,000	579,700	436,404	460,386	599,045
Other sorts.....	29,544	56,760	37,771	121,458	38,213
Aggregating ....	1,234,826	1,351,379	1,109,471	1,193,570	1,318,300
Sales in December....	227,932	693,195	374,284	652,209	707,400
Stocks, December 31.	1,006,894	658,184	735,187	541,361	610,900
Arrivals since Jan. 1	5,054,473	5,772,062	5,713,728	5,763,856	5,726,483
Congo sorts.....	4,346,141	4,593,759	4,442,607	4,723,618	5,180,401
Other sorts.....	708,332	1,178,303	1,271,121	1,040,238	546,082
Sales since Jan. 1..	4,705,763	5,849,065	5,519,805	5,833,395	5,773,668

## EXPORTS OF INDIA-RUBBER FROM PARA IN 1907 AND FOR TEN YEARS.

[The Figures Indicate Weights in Kilograms.]

MONTHS.	UNITED STATES.			EUROPE.			TOTAL.
	Fine.	Medium.	Coarse.	Fine.	Medium.	Coarse.	
July.....	156,006	33,083	228,726	430,635	44,673	195,174	867,077
August.....	204,259	50,614	213,295	425,126	65,721	173,796	997,738
September.....	437,405	90,728	309,933	824,209	131,182	184,352	1,266,388
October.....	777,049	126,859	357,962	963,342	116,330	170,748	1,526,491
November.....	914,831	212,179	402,089	1,220,318	133,507	303,609	1,970,995
December.....	654,483	112,482	258,515	875,808	105,402	357,235	1,582,391
Total, 6 months.....	3,144,033	625,945	1,770,520	4,739,438	596,815	1,384,914	8,220,980
January-June.....	4,864,879	1,235,930	3,378,592	6,048,024	762,349	1,866,268	12,691,611
Total, 1907.....	8,008,912	1,861,875	5,149,112	10,787,462	1,359,164	3,191,182	20,912,591
Total, 1906.....	7,406,171	1,785,315	5,469,419	9,289,310	1,253,574	3,223,944	18,575,451
Total, 1905.....	7,173,403	1,518,444	4,921,222	10,052,634	1,291,703	2,498,516	18,656,543
Total, 1904.....	8,062,104	1,630,355	5,394,429	7,615,817	993,955	2,503,520	14,334,668
Total, 1903.....	7,248,065	1,621,827	5,020,646	9,156,872	1,167,956	2,650,748	16,001,547
Total, 1902.....	6,388,524	1,614,776	4,523,413	8,522,521	1,514,521	2,595,177	14,689,912
Total, 1901.....	8,027,727	1,926,595	4,271,456	13,859,868	1,556,358	2,605,553	14,739,520
Total, 1900.....	6,557,277	1,190,611	3,783,279	7,939,010	1,401,390	3,256,960	14,313,996
Total, 1899.....	7,583,405	1,319,349	4,023,710	7,798,537	1,030,459	2,527,013	11,551,691
Total, 1898.....	5,399,654	868,982	2,759,714	6,410,647	1,125,688	2,995,801	12,078,742



# FORSYTH PATENT FOR PACKING WITH PLIABLE SHEET METAL INSERTION, SUSTAINED BY THE COURTS



Sheet Packing

U. S. Letters Patent, dated April 11, 1899 to James Bennett Forsyth, which has been the subject of litigation extending through the several United States Courts, to the United States Supreme Court, has been fully and broadly sustained, and covers PLIABLE SHEET METAL INSERTION PACKING in sheet, Tubular and other forms.



Tubular Gasket Packing

**We are the sole manufacturers of such packings and infringers will be prosecuted.**

## BELTING

## HOSE

## PACKINGS

All Kinds for all purposes Sheet and rod—great variety

### Gaskets

Valves Tubing

Springs

Rubber Covered Rollers



### Mats

Matting Treads

Diaphragms

Printers' and

Lithographers' Blankets

## Forsyth Patent Deckle Straps

Uniformly flexible  
The most economical

MANUFACTURED BY

# BOSTON BELTING CO.

ESTABLISHED  
1828

JAMES BENNETT FORSYTH, Mfg. Agt. and Gen. Mgr

Boston	New York	Buffalo	Cleveland	Toledo	Chicago	Milwaukee
Philadelphia	Baltimore	Atlanta	New Orleans	Memphis	St. Louis	
San Francisco	Los Angeles	Portland	Tacoma	Seattle		

Mention The India Rubber World when you write.



TRADE MARK.

AWARDED GOLD MEDAL  
at  
ST. LOUIS EXPOSITION,  
1904.

## EUREKA FIRE HOSE CO.,

13 BARCLAY ST., NEW YORK.

MANUFACTURERS OF THE CELEBRATED BRANDS

"RED CROSS" ( $\frac{2}{4}$  Ply) "PARAGON" ( $\frac{3}{4}$  Ply) "EUREKA" ( $\frac{4}{4}$  Ply)

"U. S." Brand Rubber Lined Cotton Fire Hose

Approved as a Factory Fire Hose by the Associated Factory Mutual Fire Insurance Companies, for Factory and Mill Fire Protection.

COTTON and LINEN HOSE of all grades, both plain and rubber-lined. All sizes.

These Goods are especially adapted for use in Woolen, Cotton, Silk, Print, Knit Goods and Carpet Mills, Dyeing and Bleaching establishments, Pulp and Paper Mills, Breweries and Distilleries, Sugar Refineries, Ice and Refrigerating Machinery, Chemical Works, Tanneries, etc. Samples and full information given on application.



## FABRIC FIRE HOSE COMPANY,

Corner Duane and Church Streets,

NEW YORK.

Patentees and Sole Manufacturers

Wax and Para Gum Treated Rubber Lined Cotton  
FIRE AND MILL HOSE.

ELKSHEAD BRAND GUARANTEED UNDERWRITERS' HOSE.

Approved by

ASSOCIATED FACTORY MUTUAL FIRE INSURANCE CO.

*Mention The India Rubber World when you write*

## COTTON HOSE,

We Spin, Weave, and Line Our Own Goods.

## GARDEN HOSE,

New Lines—New Methods.

## BELTING and PACKING.

Empire Rubber Mfg. Co.,

NEW YORK.

CHICAGO.

BOSTON.

ST. LOUIS, MO.

Factories: TRENTON, N. J.

*Mention The India Rubber World when you write.*

# Boston Woven Hose & Rubber Co.

ESTABLISHED 1870



Manufacturers of

## MECHANICAL RUBBER GOODS

CANVAS BELTING and BRASS GOODS

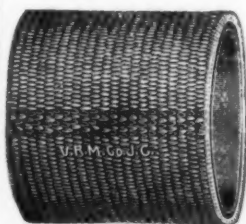
Works: CAMBRIDGE, MASS. PLYMOUTH, MASS.

Warehouses: NEW YORK, PITTSBURG, CLEVELAND, CHICAGO.

Offices: BOSTON, PHILADELPHIA, BUFFALO, DETROIT, ST. LOUIS, MILWAUKEE, SAN FRANCISCO.

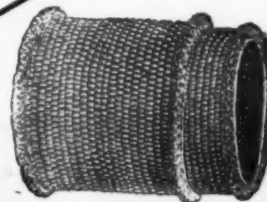


Cotton Garden Hose

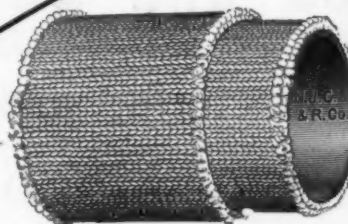


Double Jacket Woven

**VOORHEES RUBBER M'F'G CO.**  
 MANUFACTURERS OF  
 Rubber Lined Cotton Garden Hose and Fire Hose,  
 Rubber Belting, Hose Packings, Etc.  
 JERSEY CITY, N. J.



Cotton Mill Hose



Double Jacket Knit

COTTON  
FIRE HOSE



# SUNSET

**Light Weight, Red Rubber, Cloth Insertion Water Bottles, Syringes, Invalid Cushions, Ice Caps, etc.**

Unequalled for durability, combined  
with softness and light weight.

## HODGMAN RUBBER COMPANY

806-808 BROADWAY, NEW YORK

Established 1838

FACTORIES: TUCKAHOE, N. Y. MT. VERNON, N. Y.

 We Manufacture Our Products by Mechanical Means 

---

## THE BLOOMINGDALE SOFT RUBBER WORKS

Manufacturers of

THE FINEST GRADES OF

## Reclaimed and Devulcanized Rubber

For Manufacturing and Mechanical Purposes

BLOOMINGDALE, N. J.

*Mention The India Rubber World when you write.*

ESTABLISHED 1836

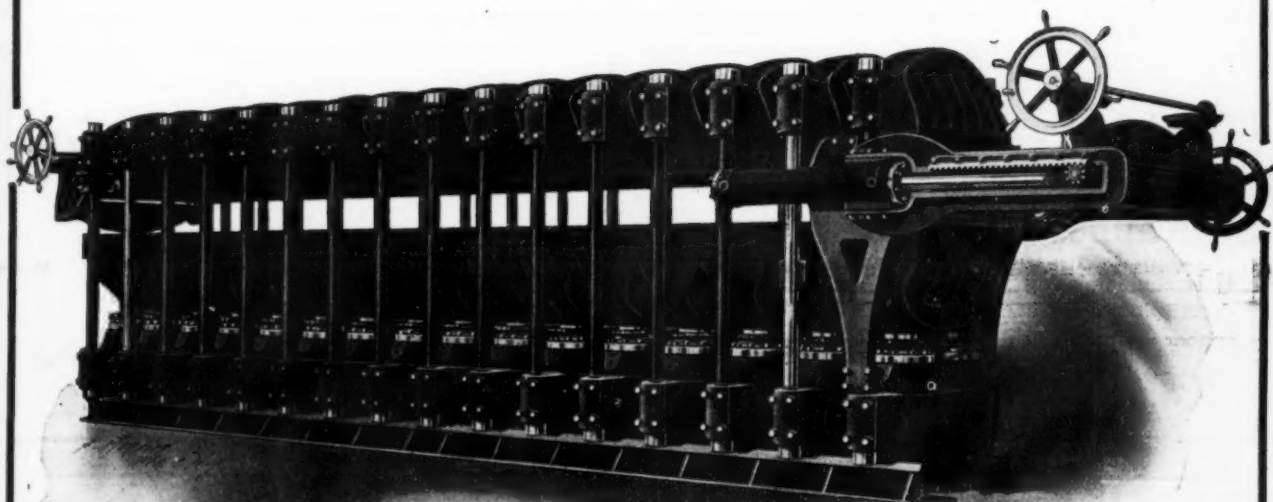
INCORPORATED 1860

# BIRMINGHAM IRON FOUNDRY

H. F. WANNING, President  
T. S. BASSETT, Vice President  
F. D. WANNING, Secretary and Treasurer

DERBY, CONN., U. S. A.

*Oldest and Largest Makers of  
RUBBER MILL MACHINERY  
in the United States*



52"x30 HYDRAULIC BELT PRESS

## RUBBER MILL MACHINERY

**MILLS** Two and Three Roll Washers—Grinders, Warmers and Mixers, all sizes up to 26" x 84"—Sheeters and Refiners—Crackers with Chilled Cut Rolls—Experimental mill for laboratory use, etc., etc.

**CALENDERS** Two, Three and Four Roll Calenders—Pearce Patent Six Roll Double Friction Calender—Soling and Upper Calenders with Engraved Rolls—Embossing Calenders for Carriage Cloth—Double Sheet Calenders—Special Calenders of all kinds.

**PRESSES** Hydraulic Presses for Belting—Clark's Patent Hydraulic Belt Stretchers—Screw Presses of all kinds—Multiple Hydraulic Presses for Mould Work—Accumulators and Pumps.

**POWER TRANSMISSION** Shafting; Pattern, Machine Moulded and Cut Gearing; Self-Oiling and Standard Pillow Blocks; Friction Clutches, etc.

**SPECIAL MACHINERY** Complete Rubber Reclaiming Plants—Belt Making Machines—Bias Cutting Machines—Automatic Jar Ring Lathes—Roller Bearing Heater Cars—Transfer Cars—Turn Tables—Cloth Dryers—Duck Slitters—Cording Machines—Band Cutting Machines—Spreaders—Varnishing Machines—Doubling Drums—Complete Hose Making Plants, etc.

*Mention The India Rubber World when you write.*

# New York Rubber Company

INCORPORATED 1851

FACTORIES AT MATTEAWAN, DUTCHESS CO., N. Y.

WAREHOUSE AND OFFICE:

84 @ 86 READE, Cor. of Church St., NEW YORK

Address P. O. Box 1160

*Mention The India Rubber World when you write.*

## VACUUM DRYERS

FOR DRYING

Sheet Rubber, Reclaimed  
Rubber and Compound

¶ If contemplating an installation get our prices,  
description and cuts. ¶ We will dry samples of  
rubber sent us and return same promptly.

**BUFFALO FOUNDRY & MACHINE CO.**  
BUFFALO, N. Y.

## THE Biggs Boiler Works Co.

AKRON, OHIO, U. S. A.

Manufacturers of

**VULCANIZERS AND  
DEVULCANIZERS**

Send in your Specifications for Special Heaters

*Mention The India Rubber World when you write.*

## THERMOID AUTO. BRAKE LINING

WILL NOT BURN—GRIPS INSTANTLY—LASTS ALMOST INDEFINITELY

### NOTICE

If Your Dealer Does not  
Have It, Write Us and  
We will Express  
It Prepaid



Made any Length, Width  
or Thickness

Ask Us About  
This Line

We Manufacture the Packing that Allows You to Forget the Packed  
but Remember the Packing

**BLACK BEAR BLACK SHEET**  
**THERMOID RED SHEET**



Patented Oct. 24th, 1899.



Reg. U. S. Pat. Office Aug. 8, 1907.

## For General Compounding

"M.R." makes a perfect union with rubber. Prevents blistering and the harsher action of free Sulphur. Absolutely acid proof. Has been used regularly by Rubber Manufacturers for several years past.

Manufactured only by the STANDARD ASPHALT & RUBBER CO., Chicago.

**GEO. A. ALDEN & CO., Boston, Mass.**

## The Cincinnati Rubber Mfg. Co.

CINCINNATI, OHIO

Solicit your orders on

**Hose (All Kinds), Rubber Belting, Sheet Packing, Tubular Gasket Packing, Valve Discs, Etc.**

Our stocks are complete, and orders receive prompt and careful attention

**O. I. M.**

ON ITS MERIT



LOW PRESSURE

**O. I. M.**

This packing is constructed of two diagonally cut wedges. **LOW PRESSURE** is made with a soft absorbent cushion. **HIGH PRESSURE** is made with a highly elastic hard friction tuck. The wedges are of our own manufacture are made of the best material and are guaranteed. The wedges are so constructed that they will slip on each other and so adapt themselves to any unevenness in a scored or worn rod. :: :: :: :: :: :: ::

**O. I. M.**

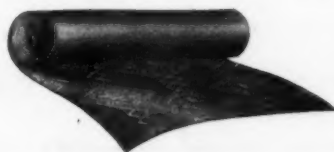
ON ITS MERIT



HIGH PRESSURE

## ORIGINAL BLACK SHEET PACKING

SPECIALLY  
ADAPTED FOR  
AMMONIA



GUARANTEED  
ABSOLUTELY  
OIL RESISTING

FOR HIGH PRESSURE STEAM

**HOME RUBBER COMPANY**  
**TRENTON, N. J.**

NEW YORK

CHICAGO

PHILADELPHIA

LONDON

Mention The India Rubber World when you write.

## NEW JERSEY CAR SPRING & RUBBER CO.

ESTABLISHED 1858.



General Offices and Works,  
JERSEY CITY, N. J.

NEW YORK  
10 BARCLAY STREET

PHILADELPHIA  
209 CENTRAL TRUST  
BUILDING

CLEVELAND  
1364 THIRD ST., N. W.

LOS ANGELES  
716 UNION TRUST BLDG.

Western Distributing Agents  
W. D. ALLEN MFG. CO.,  
151 LAKE STREET,  
CHICAGO, ILL

MANUFACTURERS OF  
**HIGH-GRADE RUBBER GOODS**  
FOR MECHANICAL PURPOSES

## WHITE RUBBER SUBSTITUTE

T. C. ASHLEY & CO., 683 ATLANTIC AVE., BOSTON

EXPERT, EXACT, COMPLETE AND  
CONFIDENTIAL

### INVESTIGATION of TROPICAL PROPERTIES

RUBBER, WILD AND CULTIVATED

Explorations and Surveys of Wild Tracts for Concession and Development a specialty. Unquestioned Reference on Application.

CHARLES JOHNSON POST  
Briar Cliff Manor, New York

### RUBBER BLANKETS FOR THE TRADE

Lithographers, Newspapers, and Printers Blankets  
Made in all sizes, widths and thicknesses, endless and open

**GUSTAVE KUSH**  
60 BEEKMAN STREET NEW YORK  
Manufacturer of Mechanical Rubber Goods

## The Western Rubber Works

Manufacturers of high class Mechanical Rubber Goods. Moulded Works of all kinds. Mill, Well, Engineers' Supplies. Plumbers' Supplies, Gaskets of all kinds, Sheet Packings, Pitcher Mats, Cuspidor Mats, Door Mats, Shoe Heels, etc.

We make a specialty of Pump Valves, Valve Discs, etc., etc.  
Write for prices and catalogue.

**THE WESTERN RUBBER WORKS**  
GOSHEN, IND.



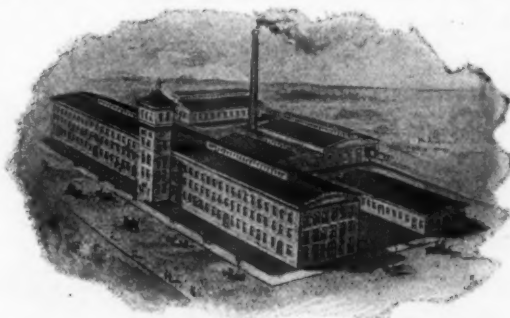
### JENKINS BROS. VALVES

Standard Pattern.

Made of new steam metal of the best grade. When fitted with the regular hard Jenkins Disc, they are guaranteed absolutely steam tight under all ordinary pressures. When fitted with a soft Jenkins Disc they are the most satisfactory valves that can be obtained for use on water, air or gas. All parts interchangeable. Every valve bearing the Trade Mark is guaranteed. Write for catalogue.

**JENKINS BROS.,**  
New York, Boston, Philadelphia, Chicago, London.

# THE ACME RUBBER MFG. CO.



Manufacturers of

**Mechanical Rubber Goods of Every Description. Rubber Carriage Drill and Duck. Rubber Carriage Tires and Rubber-Covered Insulated Wire.**

We feel we have taken a step upward in our change of name. We are reaching towards the top. Our name will be indicative of the quality of our product. Factory design the most modern in our line. Machinery of the latest and most approved description. Only first-class raw materials used, and nothing but reliable grades produced.

**FACTORY - - - TRENTON, N. J.**

BRANCH STORES

CHICAGO:  
248 Randolph Street

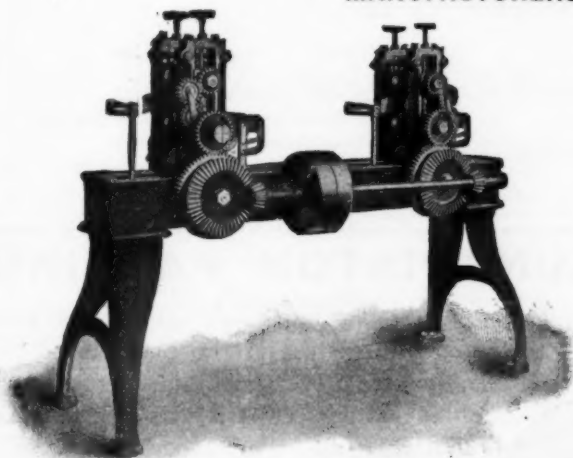
NEW YORK:  
55 Warren Street

BOSTON:  
276 Devonshire Street

*Mention The India Rubber World when you write.*

## NEW ENGLAND BUTT COMPANY, PROVIDENCE, RHODE ISLAND.

MANUFACTURERS OF MACHINERY.



TWO HEAD RUBBER COVERING MACHINE.

**Rubber Strip Covering Machines  
For Covering Electrical Wires.**

**Strip Cutters and Rubber  
Spreading Machines.**

**Braiders for Covering Rubber Hose.**

**Complete Line of Machinery for Insu-  
lating Electrical Wires and Cables.**

**FINE CASTINGS A SPECIALTY.**

*Mention The India Rubber World when you write.*



# THE MANHATTAN RUBBER MFG. CO.

CABLE ADDRESS  
MIALOGIA, N. Y.

PASSAIC, NEW JERSEY.  
On Delaware, Lackawanna & Western Railroad.

TELEPHONE:  
No. 570 PASSAIC.

BELTING  
HOSE  
PACKING  
TUBING  
MATTING



ROLLS  
GASKETS  
TILING  
MOULDED  
GOODS

—MAKERS OF—

## Mechanical Rubber Goods.

NEW YORK:  
18 Vesey Street.

BOSTON:  
60 Pearl Street.

BRANCH HOUSES:  
CHICAGO:  
103 Lake Street.

ST. LOUIS:  
214 N. Second Street.

BALTIMORE:  
13 West Pratt Street.

*Mention The India Rubber World when you write.*

### Lake Shore Rubber Co.

Manufacture Mechanical Rubber Goods,  
HOSE, BELTING, PACKING, VALVES,  
GASKETS, ELECTRICAL TAPE, OIL  
WELL SUPPLIES, Etc.

WRITE FOR PRICES AND SAMPLES.

Office and Works, ERIE, PA.

*Mention The India Rubber World when you write.*

### MECHANICAL FABRIC CO.

PROVIDENCE, R. I.

Manufacturers of

*India Rubber Thread*  
for Weaving and other uses

*Card Cloths*  
of Woolen, Cotton and Rubber

*Rubber Coated Cloths*  
Vulcanised or Unvulcanised for various purposes

CORRESPONDENCE SOLICITED

*Mention The India Rubber World when you write.*

### DODS CROSS EXPANSION PISTON PACKING.



CROSS  
SECTION



PAT. MAR. 15. 1898

Dods Packing, made from high grade Rubber and Duck on the bias, placed at a diagonal from every side, has a cross expansion of 100 per cent.; it will hold steam or liquid when all others fail.

Send for Samples to Dept. 6.

MANUFACTURED BY

**BOWERS RUBBER WORKS**  
68-70 Sacramento St., San Francisco, Cal.

*Mention The India Rubber World when you write*

# American Hard Rubber Co.

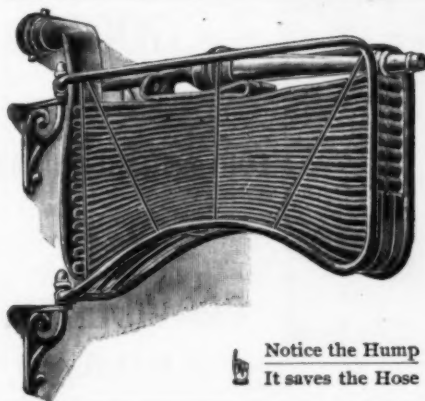
Works at  
College Point, New York;  
Butler, New Jersey;  
Akron, Ohio.

Main Office:  
9, 11, 13 Mercer Street,  
New York City,  
N. Y.

WORKS ESTABLISHED 1851.

## HARD RUBBER GOODS

OF EVERY DESCRIPTION



Notice the Hump  
It saves the Hose

WIRT'S PATENT  
Hose Carts, Reels and Racks

Made Exclusively of  
Wrought and Malleable Iron.  
SOLD AND USED EVERYWHERE.

Send for descriptive Catalogue.

WIRT & KNOX MFG. CO.,

17 North 4th Street,  
PHILADELPHIA, PA.

Mention The India Rubber World when you write.



## CONTINENTAL TYRES, CONTINENTAL MECHANICAL RUBBER GOODS.

CONTINENTAL CAOUTCHOUC & GUTTAPERCHA CO.,

Hanover, Germany.

NEW YORK OFFICE: 43 WARREN STREET.

Mention The India Rubber World when you write.



Bicycle, Carriage, Automobile.  
NONE BETTER.

**KOKOMO RUBBER CO.,**  
KOKOMO, IND.

Mention The India Rubber World when you write.



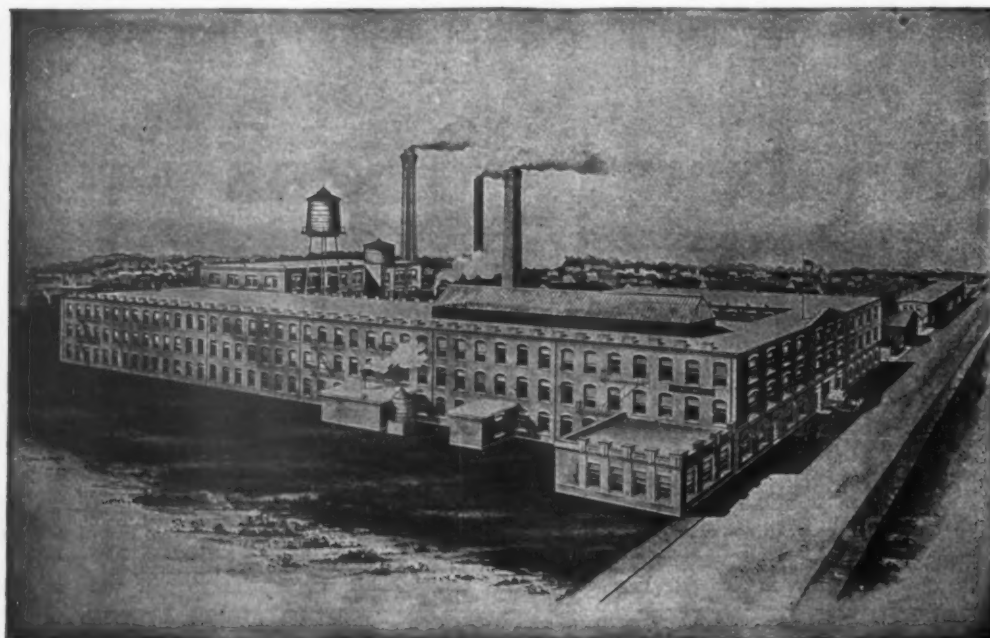
THERE is not, in Canada, a more  
widely or favorably known trade  
mark than the DUNLOP two hands.  
It stands for push in business, for  
good rubber and the square deal.

CORRESPONDENCE SOLICITED REGARDING  
ANY MATTER TOUCHING THE DEVELOPMENT  
OF THE RUBBER TRADE IN CANADA . . . .

**The Dunlop Tire & Rubber Goods Co.**  
(LIMITED)  
TORONTO, CANADA

Mention The India Rubber World when you write.

# DAVOL RUBBER COMPANY



ESTABLISHED 1874

MANUFACTURERS OF

**FINE  
RUBBER  
GOODS**

IN

SOFT and HARD RUBBER

**PROVIDENCE,  
R. I., U. S. A.**

PLANT OF THE DAVOL RUBBER COMPANY

*Mention The India Rubber World when you write.*

## Proofers of cloth for the trade.

TRIPLEX DUCKS AND COTTON COVERTS

For Teamsters' Jackets.

CLOTHS FOR MACKINTOSHES.

## Heavy Calendered Sheetings & Drills.

Silks, Velvets, Fine Specialties and Single Textures.

**PLYMOUTH RUBBER CO.,**

STOUGHTON, MASS.

Mould and Press Work.

The "Nerveze" Rubber Heel.

*Mention The India Rubber World when you write.*

## MATTSON RUBBER CO., LODI, N. J.

New York Stock Rooms:  
981 EIGHTH AVE.

ESTABLISHED 1875.

Largest Manufacturers of Complete Line of  
Tire Repair Stocks and Fabrics. Write for  
samples and quotations.

Patented Sponge Rubber Handle Bar Grips for Cycles and  
Motorcycles. Moulded and Special Rubber Goods. Stamp  
and Sponge Rubber. Hat Manufacturers' Rubber Supplies.

Unvulcanized compounds of all grades, and for all  
purposes a leading specialty.

*Mention The India Rubber World when you write.*

## 1908 PRICE LIST

# BAILEY'S RUBBER BRUSHES



**Bailey's  
"Won't Slip"  
Crutch Tip**

	PER DOZ.		PER DOZ.		PER DOZ.
Bailey's Rubber Bath Brush,	\$12.00	Bailey's Rub. Tooth Brush, No. 1,	\$2.00	Bailey's Rubber Bubble Blower,	\$0.75
" " Shampoo " "	6.00	" " " " No. 2,	2.50	" " Glove Cleaner,	.75
" " Complexion " "	4.00	" " Manicure Brush,	2.00	" " Mas'ge Roller,	4.00 doz.
" " Petite Complexion Brush,	2.00	" " Sewing Fingers,	3.50 gro.	" Duplex " "	8.00 doz.
" " Facial Brush,	4.00	" " Teething Ring,	.75	" Body " "	16.00 doz.
" " Hand " "	4.00	" " Heel Cushion,	2.00	" Skin Food,	4.00 doz.
" " Toilet " "	2.00	" " Soap Dishes,	2.50	" Rubber Exerciser,	5.00 each

Bailey's "Won't Slip" Crutch Tip (all sizes), \$1.00 per doz. All Goods sent prepaid by us

**C. J. BAILEY & CO.**

Manufacturers and Patentees

22 BOYLSTON STREET - - - BOSTON, MASS., U. S. A.

*Mention The India Rubber World when you write.*



**F. H. APPLETON & SON**

MANUFACTURERS OF

**RECLAIMED RUBBER**

No. 185 Summer Street,

BOSTON, MASS.

Factory: Franklin, Mass.

Telephone: Oxford, 460

*Mention The India Rubber World when you write.***JOSEPH STOKES RUBBER CO.**

MANUFACTURERS OF

**HARD RUBBER GOODS**

QUALITY AND SERVICE GUARANTEED

Main Office and Factory:  
TRENTON, N. J.Western Branch:  
40 DEARBORN STREET  
CHICAGO, ILL.*Mention The India Rubber World when you write.*MADE IN  
**AMERICA BY AMERICANS****FEATHEREDGE**

RUBBER SPONGES

"N" Tire Rubber Sponge Co.

35-37-39-41 E. Indiana St., Chicago, Ills.

**THE LUZERNE RUBBER CO.**

MANUFACTURERS

**HARD RUBBER GOODS**

Office and Works, TRENTON, N. J.

*Mention the India Rubber World when you write.***THE RUBBER PRODUCTS CO.**

BARBERTON, OHIO

Manufacturers of

Mechanical Goods, Druggist Sundries, Fruit Jar Rings

*Mention The India Rubber World when you write.***The Atlas Chemical Co.**

NEWTONVILLE, MASS.

MANUFACTURERS OF

**SULPHURET OF ANTIMONY**

FOR THE RUBBER TRADE.

*Mention The India Rubber World when you write.***The Household Rubber Company**

Office and Factory, YOUNGSTOWN, O.

Manufacturers

**Rubber and Canvas also All Canvas Aprons, Cuffs,**

...of

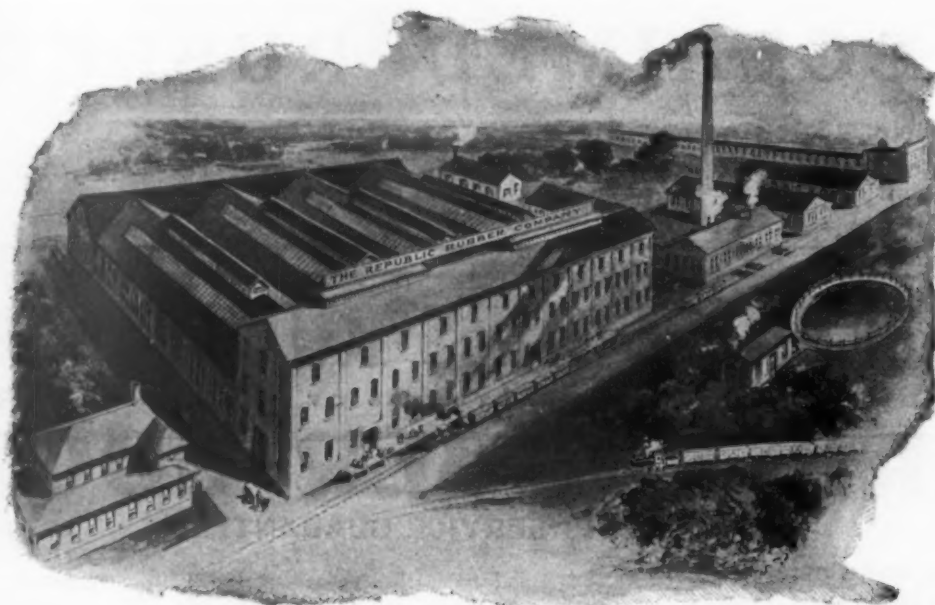
**Soles, Heels, and Handlers for Iron and Steel Workers**

Window, Floor, Bar and Counter, Sink and Bathing cleaners. We also make a specialty of Jobbing Hard and Soft Rubber Goods of every description. Correspondence solicited.

*Mention The India Rubber World when you write.*

# THE REPUBLIC RUBBER COMPANY

## YOUNGSTOWN, OHIO.



THE MOST MODERN MECHANICAL RUBBER GOODS FACTORY IN EXISTENCE.

"FREE FROM HARMFUL SUBSTANCES"



Unadulterated Corn Oil Substitute for Rubber

USED WITH BEST RESULTS IN MANY  
PROMINENT RUBBER MILLS

CORN PRODUCTS REFINING CO., 26 BROADWAY,  
NEW YORK.

ESTABLISHED 1877.

## THE SEAMLESS RUBBER COMPANY

MAKERS OF

HIGH GRADE DRUGGIST'S  
RUBBER SUNDRIES

ALSO

SEAMLESS AND HAND-MADE  
RUBBER GLOVES



CORRESPONDENCE

SOLICITED

MAIN OFFICE AND FACTORY:  
NEW HAVEN, CONNECTICUT.

NEW YORK OFFICE,	"	"	"	296 BROADWAY.
CHICAGO	"	"	"	173 RANDOLPH STREET.
BOSTON	"	"	"	108 SUMMER STREET.
MONTREAL	"	"	"	72 ST. ANTOINE STREET.
LONDON	"	"	"	26 CITY ROAD, E. C.

Mention the India Rubber World when you write.



## It's So Different

That's what everybody says about this new "Boston" banner—"A Little Rain-Dea." That's the reason we issued it—it's so out of the usual run. It will attract a great deal of attention in your window or on your wall. In size it is 15x22 inches, and is printed in colors.

YOUR JOBBER CAN SUPPLY YOU. ASK HIM.

# BOSTON RUBBER SHOE CO.



## RAINBOW PACKING

Makes a Steam Flange and Hot Water Joint Instantly.

Don't have to use wire and cloth  
to hold Rainbow.  
Can't blow it out.



Thousands of Imitators.  
No Equal.  
Will Hold Highest Pressure.

### THE COLOR OF RAINBOW PACKING IS RED.

None Genuine without our Trade Mark, the word "Rainbow" in a Diamond in black in three rows of Diamonds extending throughout the entire length of each and every roll of Rainbow Packing.

## Peerless Rubber Fire Engine Hose.

We would call the attention of those desiring to purchase Fire Hose to the fact that we have in the New York Fire Department, Hose which has been in constant use for over eight years and shows no sign of giving out.

### Peerless Suction Hose.

Our Peerless Steel-Clad Suction Hose has become a general favorite among Firemen. It has been adopted as the standard by some of the largest City Fire Departments in the United States and foreign countries.

We guarantee this hose in every respect, and can repair it when damaged.

## RUBBER HOSE.

CONDUCTING,  
GARDEN,

Peerless,  
Lakeside,  
Red Label,  
Crown,  
Knicker,  
Made any diameter.



ENGINE,  
HYDRANT.

Rainbow Ribbon,  
Sterling,  
Rellance,

Made only in  $\frac{1}{2}$  and  
 $\frac{3}{4}$  inch.

## Fortune Seamless Rubber Belt.

Absolutely the finest and most durable  
Rubber Belt yet produced.  
Every belt tested before leaving factory.



We have the most modern and extensive  
belt machinery in the world and guarantee  
satisfaction in every instance.



Copyrighted and Manufactured Exclusively by

## THE PEERLESS RUBBER MANUFACTURING COMPANY,

16 WARREN STREET, NEW YORK.

88 CHAMBERS STREET, NEW YORK

### LIST OF AGENCIES' ADDRESSES OF THE PEERLESS RUBBER MANUFACTURING CO.

Detroit, Mich.—24 Woodward Ave.; Chicago, Ill.—202-210 South Water St.; Indianapolis, Ind.—18 S. Capitol Ave.; Louisville, Ky.—111-121 W. Main St.; New Orleans, La.—Cor. Common and Tchoupitoulas Sts.; Omaha, Neb.—1218 Farnam St.; Richmond, Va.—1323 E. Main St.; Philadelphia, Pa.—220 S. Fifth St.; Dallas, Texas—177 Elm street; Memphis, Tenn.—228 Front St.; St. Louis, Mo.—1213 Locust St.; Denver, Col.—1621-1639 17th St.; San Francisco, Cal.—17-23 Beale St. and 12-24 Main St.; Seattle, Wash.—Railroad Way and Occidental Ave.; Kansas City, Mo.—1221-1223 Union Ave.; Waco, Texas—700-711 Austin Ave.; Pittsburg, Pa.—634 Smithfield St.; Atlanta, Ga.—7-9 S. Broad St.; Columbus, Ohio—Cor. Long and Third Sts.; Cleveland, Ohio—61 Frankfort St.; Buffalo, N. Y.—379-383 Washington St.; Boston, Mass.—110 Federal St.; Syracuse, N. Y.—212-214 S. Clinton St.; Rochester, N. Y.—55 E. Main St.; Houston, Texas—113 Main St.; Baltimore, Md.—37 Hopkins Place.

# SAFEGUARD YOUR FACTORY AGAINST FIRE



With a Piece of Dependable COTTON  
RUBBER LINED MILL HOSE

## Alarm Brand

Approved by the Associated Factory's Mutual Fire Insurance Companies and the National Board of Underwriters, and made in the house of "GOODRICH." A hose that not only easily meets all the specifications exacted by the underwriters, but, what is more, stays good for a long time and is ready for service when the emergency arises.

Made of smooth tough rubber on the inside and a firmly woven cotton jacket on the outside.

And if it is other than mill hose on your want list, no factory is so well fitted, by reason of size, equipment and experience, to take care of your orders.

### The B. F. GOODRICH COMPANY, Akron, O.

CHICAGO, 24 E. Lake St. DENVER, 1536 Glenarm St. OAKLAND, 4th and Washington Sts.  
BOSTON, 161 Columbus Ave. SEATTLE, 310 First Ave. South. LOS ANGELES, 518 South Broadway.  
DETROIT, 266 Jefferson Ave. LONDON, 7 Snow Hill, E. C. CLEVELAND, 2188 Ninth St. S. E.  
ST. LOUIS, 3926-28 Olive St. PHILADELPHIA, 1932 Arch St.

Our Products are also handled in NEW YORK, 66-68 Reade St. BUFFALO, 731 Main St.  
by THE B. F. GOODRICH COMPANY OF NEW YORK.

## NEW YORK BELTING AND PACKING CO., Ltd.

MANUFACTURERS OF THE HIGHEST GRADES OF  
**ALL KINDS OF HOSE**

Including Air Brake, Air Drill, Brewers', Car Heating, Dredging Sleeves, Engine and  
Tender, Fire, Garden, Gas, Linen, Mill, Pneumatic Tool,  
Signal, Steam, Suction and Water Hose

Also a Complete Line of Fine Mechanical Rubber Goods

---

**Nos. 91-93 CHAMBERS STREET, NEW YORK**

*Mention The India Rubber World when you write.*

## RUBBER BELTING

**"SHIELD HIGH-GRADE" BRAND**

Every foot guaranteed  
in strongest possible  
manner



We make everything  
in rubber



Our warrant is indelibly  
stamped upon every Belt  
to protect the user



Write for Catalog  
and prices

---

**THE MECHANICAL RUBBER CO., CLEVELAND, OHIO**



WILLIAM T. BAIRD, President

ROBERT B. BAIRD, Vice President

# RUBBER TRADING COMPANY

38 MURRAY STREET, NEW YORK

TELEPHONE: 118 CORTLANDT

BOSTON OFFICE: 161 SUMMER STREET

TELEPHONE: 1983-2 OXFORD

CABLE ADDRESS CHAUNBAIR, NEW YORK and BOSTON

## CRUDE RUBBER

Washed and Broken Down (or Refined) Rubber a Specialty.

*Mention The India Rubber World when you write.*

Largest Dealer in Russia  
Old Russian Rubber Boots *and* Shoes

M. J. WOLPERT

ODESSA, Russia

# LITHARGE

for Rubber Manufacturing

... WRITE FOR PRICES ...

PICHER LEAD COMPANY

NEW YORK, 100 William Street

CHICAGO, 511 Tacoma Building

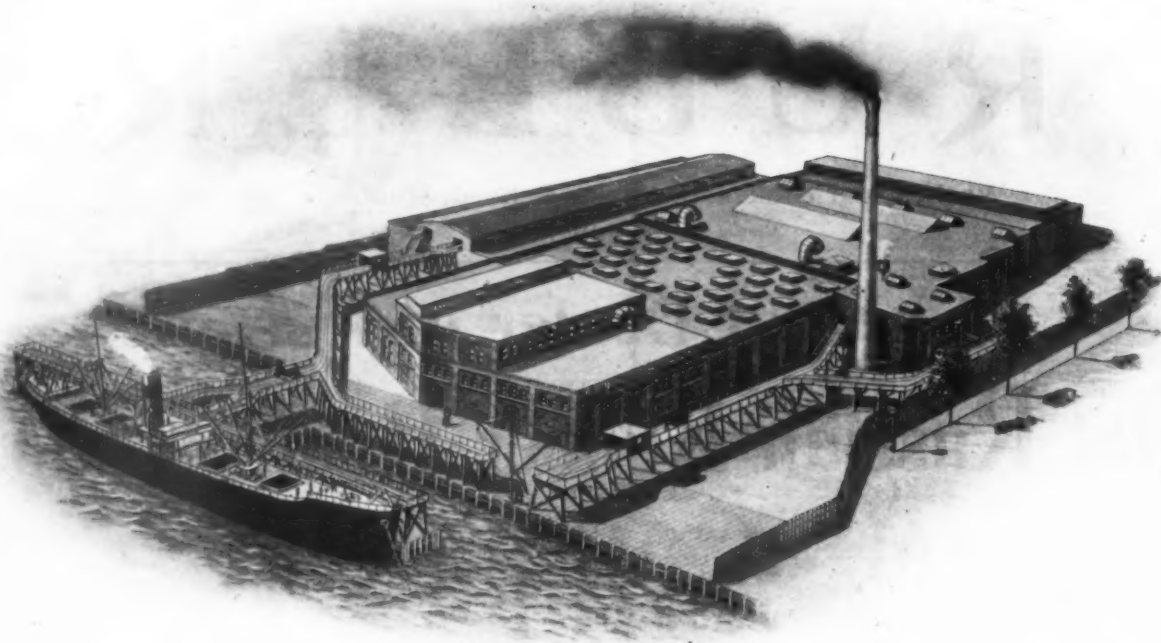
In our NEW FACTORY, from which shipments of

# WHITING

are now being made, we are PLEASED to know that our efforts to produce goods of a quality superior to those heretofore made by us (which have established with the trade the standards of the respective grades) have been completely successful.

In thus ELEVATING the STANDARDS we make NO ADDITIONAL CHARGE for IMPROVED QUALITY.

It is with GREAT SATISFACTION that we make this announcement to our customers and the TRADE generally.



Our capacity is such that we can now fill orders promptly.

The same conditions prevail as to "WESTMINSTER" and "VICTORIA" ENGLISH CLIFFSTONE PARIS WHITE.

CONFIRM THESE FACTS BY APPLYING FOR SAMPLES AND QUOTATIONS

## The H. F. Taintor Manufacturing Co.

No. 200 WATER STREET, NEW YORK CITY

ESTABLISHED 1855.

**Geo. A. Alden & Co.,**

IMPORTERS OF

**India Rubber and  
Gutta Percha,****60 CHAUNCY STREET,  
BOSTON.***Mention The India Rubber World when you write.***WALLACE L. GOUGH CO.**

IMPORTERS OF

**Crude India Rubber  
Gutta Percha and Balata****108 Water Street  
NEW YORK****186 Devonshire Street  
BOSTON**

Telephone 2563 BROAD, N. Y.

Telephone 1528 MAIN, Boston

Cable Address New York or Boston "FICUS"

**THE ALKALI RUBBER CO.****AKRON, OHIO**

MANUFACTURERS OF

**HIGH GRADE  
RECLAIMED RUBBER**

Reg. U. S. Pat. Office.

Containing No Oils or Other Added Adulterants

A Live, Permanent Stock

DOES NOT HARDEN OR DRY OUT AFTER COMPOUNDING

**Use Less Crude Rubber****PEQUANOC RUBBER COMPANY**

MANUFACTURERS OF

**Pure Reclaimed Rubber****BY AN IMPROVED PROCESS.****A strictly high-grade, superior product. Absolutely bone dry, clean and reliable at all times. Specially adapted for the insulated wire trade.**

Factory and Office:

BUTLER, NEW JERSEY.

Telephone: 16 Butler.

SAMPLES AND PRICES ON APPLICATION.

*Mention The India Rubber World when you write.*



**DIRECTORY**  
of the  
**INDIA-RUBBER, GUTTA-PERCHA**  
**AND ALLIED TRADES**  
**In the United States**  
**FOR 1908.**

**T**HIS volume contains, among other information of value and interest to the trade, a carefully prepared, authentic and up-to-date list of

**RUBBER MANUFACTURERS,**  
giving the location of Factories, Offices, Branches and Agencies, covering the following lines:

Mechanical Rubber Goods  
Packing  
Druggists', Surgical, and Station-  
ers' Supplies  
Hard Rubber  
Rubber Clothing, Mackintoshes,  
Cravenettes  
Carriage Cloth  
Insulated Wires and Cables

Toys and Sporting Goods  
Cements  
Dental and Stamp Rubber  
Notions and Specialties  
Rubber Tires  
Rubber Footwear  
Reclaimed Rubber  
Crude Rubber Producers, Import-  
ers and Brokers

Rubber Planters (Mexico, Central  
and South America)  
Rubber Factory Supplies  
Rubber Machinery  
Fabrics for the Rubber Industry  
Compounding Ingredients  
Plastics  
Oil Clothing  
Table Oilcloth

**DISTRIBUTERS' LIST**

The Directory, in addition to cataloguing the Producers, will also include the addresses of RUBBER GOODS STORES, together with the more important handlers of

Footwear  
Tires (together with Repair Shops)  
Belting, Packing and Hose

Clothing  
Hard Rubber  
Druggists' Sundries

Insulated Wires and Tapes  
Sporting Goods  
Waste Rubber

TRADE MARKS.—The Directory will also embrace a complete list of the Trade Marks and Trade Brands used in all the lines of Rubber manufacture, alphabetically arranged.

LAWS RELATING TO FOREIGN CORPORATIONS.—There will appear, also, an analysis and abstract of the laws of all the States and Territories in relation to "foreign" corporations—a most important feature for any firm doing business outside its own State.

**PRICE, \$3.00, POSTPAID.**

**THE INDIA RUBBER PUBLISHING CO.,**  
**NO. 395 BROADWAY, NEW YORK.**

**PARANITE  
AND PEERLESS**

## RUBBER COVERED WIRES AND CABLES



**Carriage Tires  
SOFT RUBBER SPECIALTIES**

AND

**Indiana and Wabash Single Tube Bicycle Tires**

MANUFACTURED BY

**The Indiana Rubber and Insulated Wire Co.**

JONESBORO, INDIANA



## THE MASON Reducing Valves

ARE THE WORLD'S STANDARD VALVES.

For automatically reducing and absolutely  
maintaining an even steam or air pressure.

*They are adapted for every need and guaranteed  
to work perfectly in every instance.*

WRITE FOR FULL INFORMATION AND  
SPLendid REFERENCES.

**THE MASON REGULATOR CO. Boston,  
Mass., U.S.A.**

SEND FOR INDEX—A copy of the Index to Crude Rubber and Com-  
pounding Ingredients may be had for the asking. Write for it if you are  
interested.  
**INDIA RUBBER PUBLISHING CO.,**  
35 West 21st Street, New York.

**WE MAKE**

## MOLDS

**DIES AND MATRIX**

We are Experts in This Line. Let Us Prove It to You.

**THE BRIDGWATER MACHINE CO.  
AKRON, OHIO**

We Are Well Equipped for the Man of Light Machinery.  
We Carry in Stock a Full Line of Brass Swivel Couplings.

## THE S. P. WETHERILL COMPANY'S No. 600 RED OXIDE

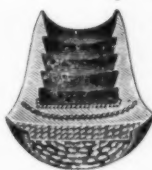
HAS GREATER COLORING CAPACITY THAN ANY  
OTHER RED PIGMENT

925 Chestnut Street, PHILADELPHIA

## THE FOSTER FRICTION PLUG CRUTCH AND CANE TIPS

(IN 9 SIZES)

ARE MADE OF BEST RUBBER. Don't Slip. Outwear All Others.



Foster, Catspaw and Tredair Heels are the only Heels made under FOSTER PATENTS and in common with the

**FOSTER PATENTED FRICTION PLUG**

Cannot Be Made by Other Concerns

Handsome Profits to Dealers

**FOSTER RUBBER CO.**

170 Summer St.  
BOSTON, MASS.

Factory,  
WALPOLE, MASS.



*Stamford*



BOSTON.

CHICAGO.

PHILADELPHIA.

**J. H. LANE & CO.**

110 WORTH ST., NEW YORK.

**NOSE  
BELT  
SAIL  
WIDE**

**DUCKS**

**PAPER FELTS  
OUNCE GOODS  
ARMY DUCK  
OSNABURGS**

**AUTOMOBILE  
AND BICYCLE**

**TIRE FABRICS****SHEETINGS AND DRILLS.****SEA ISLAND, EGYPTIAN, AND PEELER YARNS,****AND FABRICS IN REGULAR AND SPECIAL CONSTRUCTION.***Mention The India Rubber World when you write.***BEFORE YOU BUILD A RUBBER MILL***Or add to its construction communicate with us***We Are Practical Rubber Mill Engineers, Architects and Construction Specialists***Save money by availing yourself of methods based on many years of "Knowing how"***AKRON RUBBER ENGINEERING CO.****Everett Bldg., Akron, O.**

Manufacturers  
of

**BRASS AND ZINC STAIR NOSINGS FOR RUBBER TREADS.***Write for Catalogue, Prices and Samples***THE PAINESVILLE METALLIC BINDING CO., Painesville, Ohio.***Established 1885.*

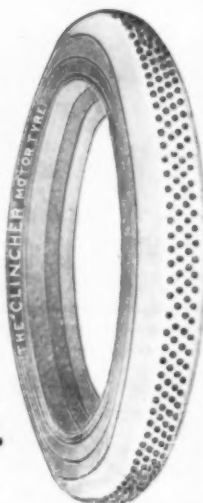
**CLINCHER  
MOTOR  
TIRES**

**RELIABLE  
DURABLE  
RESILIENT**

**Trans-  
verse  
Grooved Non-  
Slipping Tread**

**Steel Studded Non-Skid Tread***Write for Illustrated Price List***North British Rubber Co., Ltd.**

**Castle Mills,  
EDINBURGH, Scotland**

**Elkhart Rubber Works****ELKHART, INDIANA**

**High Grade Mechanical Rubber  
Goods and Moulded Specialties  
and Hard Rubber Discs**

**WASHERS, SPRINGS, BUMPERS, PLUMBERS'  
FORCE PUMPS**

**PUMP VALVES A SPECIALTY****RESERVED FOR****The American Talc Co.****24 Custom House Street****Boston, Mass.**



## The Publishers' Page

### Our New Location.

THE INDIA RUBBER WORLD desires to announce a change of location to No. 395 Broadway, at the corner of Walker street. The section of the city where we have been located for some time past is now being rapidly rebuilt, rendering the old premises less desirable for certain reasons than when our occupancy of them began. Besides, the new quarters afford more space, with certain other advantages due to our getting into a more modern building. At our new offices, as before, members of the trade may feel at all times assured of a cordial welcome, and we shall be particularly pleased if our friends out of town will make a note of 395 Broadway, with a view to calling whenever they may have occasion to visit New York.

### What Makes Business "Dull."

WHENEVER business is "dull" it is an indication merely that people are temporarily working less for the future. In normal times houses are being built for tenants who are to come; railways and ships for commerce not yet developed; factories to make goods not yet in demand; and so on. But when business circles become concerned only about to-day's wants, all the workers who have been employed on these works for prospective needs of the community lose their employment, and the money which they have been accustomed to receive in wages is withdrawn from circulation, lessening the sale of goods and supplies of all kinds. Contractors and wage earners, manufacturers and dealers all find the volume of their transactions limited, and consequently the opportunities for profit. In other words, the "life" of business depends upon constant growth; the slightest check to growth spells "dullness," no matter how great may be the volume of trade required to meet the wants of the public while things are simply standing still.

### Optimistic Rubber Men.

THE rubber trade, in common with almost every other form of business, is feeling the effects of dullness just now. A feeling of optimism prevails in the trade, it is true, because most of the leaders in the trade have been engaged in it long enough to have experienced similar periods of dullness in the past, and they have always seen these followed by periods of even greater growth than before. Naturally they expect that these experiences will be repeated, though of course no amount of hopefulness regarding next year will pay this year's bills or provide for current dividends. It does not supply factory employees with wages or keep money in circulation in factory towns. Still the optimistic spirit is a blessing, in that it encourages the keeping together of the factory organization and the laying out of plans for the aggressive pursuit of orders when the general public again begins to buy freely.

### A Good Time to Plan.

FORTUNATELY the products of the rubber industry are so varied that they go into practically every department of human wants. If one class of rubber goods happens to be in less demand at any particular time, it may be that another class is called for more than usual. At any rate the rubber industry, as a whole, is in a position to profit from the first improvement in business in whatever quarter. The individuals in the trade should be prepared, each and every one, to take advantage, according to the character of his output, of each and every encouraging sign of reviving

trade. And this is to be done by keeping the factory in the best possible shape for work, by keeping the store supplied with goods in readiness for every improvement in demand, by keeping an outlook for the first possible new customer. In times of dullness such as this, therefore, the proprietor and his lieutenants have opportunities for taking stock of ideas and plans as well as their more tangible assets—better, perhaps, than when crowded with the work of filling a rush of orders for goods when times are not dull.

### Don't Forget to Advertise.

WE take it that live manufacturers in any line of business need no argument as to the importance of advertising. It has become part of the settled policy in every department of trade. But the suggestion may not be out of order, since it is part of the business of THE INDIA RUBBER WORLD to offer advertising space for sale, that this journal has come to be widely regarded with favor as a medium for selling rubber goods, and supplies for rubber factories. And we may offer the further suggestion that we shall be pleased to take up with firms in the trade who may be thinking of advertising more extensively or in a new direction—or new firms who may contemplate the beginning of an advertising campaign—the details of preparing announcements with a view to making them of the utmost possible advantage to them.

### From an Advertiser in Japan.

TO THE INDIA RUBBER WORLD—Gentlemen: We have already advised you that we have received replies from our advertisement in your journal. We have since received a communication from a rubber house at Havre, which we believe secured our name from THE INDIA RUBBER WORLD, and this tends to show the wide circulation that your journal enjoys. Yours very truly,

Yokohama, Japan, Nov. 16, 1907.

& Co.

### From an English Paper.

OUR journal is reviewed in the "Publications Received" column of *The African Mail*, of Liverpool, which remarks of the last number of THE INDIA RUBBER WORLD that it "contains the usual amount of interesting matter relating to rubber and everything affecting it."

### The Time to Subscribe.

THE beginning of a new year is preferred by very many people as the date for beginning a subscription to a newspaper, and we are desirous of bringing our own journal to the notice of any members of the trade whose names may not be on our lists already. We should especially appreciate it if any of our subscribers should favor us with the addresses of friends of theirs who might possibly be interested in the paper, when specimen copies will be supplied.

### Our Rubber Tire Book.

Nor only has Mr. Pearson's book, "Rubber Tires and About Them," received the most encouraging expressions of commendation from members of the trade and individual tire users, but the trade press in America and Europe has contained many favorable notices of it.

The *Carriage Monthly* (Philadelphia) says: "There may be those who think they know all about tires that is worth while, but they will conclude differently if they will peruse this well written volume."

# Small Advertisement Department.

## SITUATIONS WANTED

**EXECUTIVE** of practical experience in all departments of manufacturing, selling or financing in all lines of goods, wants position after January 1, to take full charge or any part. Address X. Y. Z., care of THE INDIA RUBBER WORLD. (1004)

**SALES OR BRANCH MANAGER**, with personal acquaintance with the large trade, desires to make new connection. Address E. M., care of THE INDIA RUBBER WORLD. (1005)

**FACTORY MANAGER OR SUPERINTENDENT**, of several years' practical experience, would like to secure position. An able executive and knows how to handle men and systems. Address F. G. H., care of THE INDIA RUBBER WORLD. (1006)

**MIDDLE-AGED** man with experience in various lines of hard rubber manufacturing, desires position where ability and hard work will be appreciated. Best of references. Address ABILITY, care of THE INDIA RUBBER WORLD. (1033)

**WANTED**—The account of some live factory equipped for taking care of large molded goods trade. Salary or commission. Address F. F., care of "The India Rubber World." (1034)

**STOCKKEEPER**.—A young man, 25 years, with several years' experience in rubber line, desires position. Immediate engagement if necessary. Best of references. Address C. M. B., care of THE INDIA RUBBER WORLD. (1035)

**WANTED**.—Position as salesman and demonstrator of compounding ingredients. Expert compounder and able to show how best results may be obtained from use of special ingredients. Address E. E., care of THE INDIA RUBBER WORLD. (1036)

**WANTED**.—Position as superintendent in mechanical rubber goods factory. Know the business thoroughly. Best of reference. West preferred. Address A. A., care of THE INDIA RUBBER WORLD. (1037)

**WANTED**.—Good connection in the manufacture of general, or special lines of rubber goods. Am able to produce goods by the best up-to-date methods, having had years of experience. Highest references. Address C. C., care of THE INDIA RUBBER WORLD. (1038)

**WANTED**.—To hear from manufacturer who desires to improve his methods in the lines of Clothing, Molded Goods, Tires, Druggist Sundries, or specialties. Strictly up-to-date backed up by much experience and satisfactory references. Address D. D., care of THE INDIA RUBBER WORLD. (1039)

**WANTED**.—Position with company manufacturing automobile tires. Have had 10 years' experience in charge of clincher and single tube automobile and bicycle tire construction. Thoroughly understand both mould and open cure work. Capable of taking charge of tire work. Best references. Address C. E. B., care of THE INDIA RUBBER WORLD. (1044)

**PRACTICAL MAN**.—Have designed, erected and started departments for hose belting, press, mill, etc.; also special machinery for various uses in the United States and England; 15 years' practical experience in manufacturing. Position desired in any of the above lines. Address M. E. P., care of THE INDIA RUBBER WORLD. (1040)

**PLANTING**.—Rubber planting expert with long experience and the best of references, who is familiar with planting in Ceylon, Federated Malay States and Java, would like a position as superintendent of plantation somewhere in the Americas. Address H. H., care of THE INDIA RUBBER WORLD. (1041)

## MECHANICAL RUBBER GOODS SALESMAN

**BELTING, AND PACKING EXPERT**.—Extensive acquaintance with steam users of Western United States, Canada, and Mexico, particularly among the mines, desires to connect with responsible manufacturer for permanent position. Best of references and proof of ability. Small salary acceptable until worth is proven. Address G. G., care of THE INDIA RUBBER WORLD. (1041)

## SITUATIONS OPEN

**CHEMIST**.—Wanted, a chemist experienced in making good rubber substitutes. Applicant should state where he has been employed, and send samples of the substitutes he can make. He should also state what salary he wants. Address SUB MAKER, care of THE INDIA RUBBER WORLD. (1014)

**WANTED**.—A first class general superintendent in mechanical rubber goods and tire factory in the West. Address T. R., care of THE INDIA RUBBER WORLD. (1026)

**WANTED**.—A good chemist familiar with the manufacture of mechanical rubber goods. Address C. G., care of THE INDIA RUBBER WORLD. (1027)

**WANTED**.—First class man with thorough knowledge of compounds and competent to take charge of manufacture of tubing and moulded rubber goods. A good opportunity to the right party with privilege of taking interest if desired. Reply with full particulars as to experience, salary expected and reference, which will be treated confidentially. Address R. S. R., care of THE INDIA RUBBER WORLD. (1028)

**SALESMAN**.—Wanted for New York, Chicago, and Pittsburgh, Pa., to sell dress shields and hospital sheeting. U. S. DRESS SHIELD CO., West Medford, Mass. (1029)

**WANTED**.—Man to take full charge of Department making full line of Cotton Hose. None but competent man need apply. THE PENNSYLVANIA RUBBER CO., Jeannette, Pa. (1030)

**WANTED**.—Competent and up-to-date salesman for mechanical rubber goods, who is acquainted with the Railroad trade, and who has been working the same satisfactorily for some years. Address Z. C. T., care of THE INDIA RUBBER WORLD. (1032)

**WANTED**.—Immediately, reliable experienced man for manufacturing rubber mold goods, capable of superintending plant. Address S., care of THE INDIA RUBBER WORLD. (1043)

## RUBBER MACHINERY

**WANTED**.—In rubber factory, Spreaders in good condition with rubber covered rolls. State width and price. Address M. C. C., care of THE INDIA RUBBER WORLD. (1020)

**WANTED**.—A second hand rubber washer with 10 x 15 inch cast rolls. Address B. C. H., care of THE INDIA RUBBER WORLD. (1025)

## BUSINESS OPPORTUNITIES

**FOR SALE**.—Retail Rubber Business, excellent location, principal business street (16th street), Denver, Colorado. Nine months ago purchased retail department of Denver Rubber Co., established 15 years. About \$5,000 cash required. Only exclusive retail rubber store in State. Splendid opening. Services of present manager can be engaged. If desired address GOODYEAR RUBBER STORE CO., P. O. Box 315, Denver, Colo. (1024)

**AGENT** for the United States desired by the second largest rubber works in Europe. They consider that, in spite of the tariff, they will be able to do considerable business in America in certain rubber surgical goods. Address EUROPE, care of THE INDIA RUBBER WORLD. (1021)

## FOR SALE OR RENT

**FOR SALE OR RENT ON EASY TERMS**.—A large new Rubber Mill, situated at Catasaugua, on the outskirts of Allentown, Pa. By railroad, within four hours from Pittsburg, two hours from New York City, two hours from Philadelphia, and three from Scranton, Pa. The Factory is a large brick, steel and cement building, 60' x 120'. Boiler room, 34' x 66'. Vulcanizing room, 18' x 75'. Chemical room, 16' x 16'. The Factory cost \$57,000. The Machinery is all new and has never been used. The Machinery was made by a first-class Rubber Mill Machinery Manufacturer in the East, consisting of one 15 x 24 Dry Sand Roll Washer, both rolls cut, one 16 x 24 Chilled Cracker, one roll cut; four 16 x 40 Mills; one 18 x 42 Stock and Friction Calendar, double speed drive; twenty 22 x 22 Screw Presses, 3 plates; two 40 x 42 Hydraulic Presses, 15" ram; one 8" x 1 1/4" x 12" Steam Pump; Two Vulcanizers 60" in diam. by 16 ft. long; one 50" Spreader with doubling arrangement that has never been taken out of the cases it was shipped in from the foundry; hydraulic pumps; two 208 horse power B. & W. Water Tube Boilers; one 20 x 40 Buckeye Engine; tanks and other apparatus; artesian well; one 16 x 12 Dean Pump; tool equipment; two smowestacks. Concrete floor all through the building. This plant is one of the most up-to-date plants in the country to-day. N. J. Central railroad siding. It comprises about three acres of land. It must be sold or leased immediately, as the party owning it is not in the manufacturing business. For all further information apply to PHILIP MCGORRY, Trenton, N. J.

## EXCEPTIONAL BUSINESS OPPORTUNITY

### FOR SALE—SMALL RUBBER FACTORY

Five miles from Boston. Running in good shape to-day, Manufacturing DRESS SHIELDS and HOSPITAL SHEETING. An easy business to manage. Address Box 143, West Medford, Mass.

**FOR SALE**.—Twenty Mixers and Grinders, four Crackers and Washers, all large sizes with heavy strong frames. One Friction Calendar, Devulcanizers, Presses and a large lot of other Rubber Mill Machinery, all complete and in first class condition. PHILIP MCGORRY, TRENTON, N. J.

**TO LET**.—Part of a small rubber factory with heat and power. It is 10 minutes to Boston and is suitable for manufacture of small specialties. U. S. DRESS SHIELD CO., WEST MEDFORD, MASS. (1031)

**FOR SALE**.—Factory Rubber Waste from Rubber Cement; cleaned at a low price; sample sent free. UNITED STATES WASTE RUBBER CO., No. 487 North Warren Avenue, Brockton, Mass.

**FOR SALE**.—Up-to-date rubber factory in the Middle West doing a good business. Good reason for selling. Address R. & W., care of The India Rubber World.

# TYPKE & KING, Ltd., 16, MINCING LANE, LONDON, E. C., ENGLAND.

JOSEPH CANTOR, AGENT IN U. S., 82-82 BEAVER STREET, NEW YORK.

## RUBBER SUBSTITUTES

FREE FROM ACID. MADE FROM REFINED RAPE SEED OIL.

### CRIMSON & GOLDEN SULPHURETS OF ANTIMONY

GUARANTEED RELIABLE, AND NOT TO VARY.

Mention The India Rubber World when you write.


## GRASSELLI WHITE.

A substitute in part or in whole for Oxide of Zinc.  
Has made for itself a permanent place in the rubber industry.  
Used by many of the largest rubber manufacturers in this country and Canada.  
We will gladly supply samples.  
We claim it the best Rubber Makers' White on the market.

THE GRASSELLI CHEMICAL CO.

60 WALL STREET, NEW YORK.

CLEVELAND, OHIO.

First Qualities.  Brand.

### CRIMSON and GOLDEN SULPHURETS OF ANTIMONY

Always contains same constant percentage of Free Sulphur.

Action Ges. Georg Egestorff's Salzwärke  
Linden, near Hanover, Germany.

Mention The India Rubber World when you write.

RELIABLE, EFFECTIVE, AND OF HIGHEST GRADES

## LITHOPONE

Sulphate and Carbonate of Barytes, Sulphate of Lime, Etc  
GABRIEL & SCHALL, Importers

205 Pearl Street - - - New York

## Le Caoutchouc & La Gutta-Percha

49, Rue des Vinaigriers, PARIS (10e), FRANCE,  
New York Office: No. 43 WEST 34th ST.

Representative---CH. DIEN

The only Journal in the French language dealing with India Rubber and Gutta-percha and the industries connected therewith, including Asbestos, Celluloid, and Insulating Materials.  
Published on the 15th of each month.

ANNUAL SUBSCRIPTION: 26 FRANCS.

An unexcelled advertising medium for firms wishing to introduce their products into France and the French colonies.

Specimen copies free. Tariff of advertisements on demand.

Mention The India Rubber World when you write.

## FARMERS BUYING GOOD TIRES.

THE Kansas City agent of the Fisk Rubber Co. is reported as saying that 70 per cent. of his business in tires is with the farmers. They are less disposed than formerly to buy cheap goods. On account of their rough roads they want the most durable tires obtainable. He says that it is a common thing for a farmer who has worked in the fields all day to run into town with his family in an automobile at night.

## RUBBER PLANTING DIVIDENDS.

SELANGOR Rubber Co., Limited.—Interim dividend at the rate of 50 per cent. for the six months ended June 30, 1907, amounting to £7,047 1s. [= \$34,298.47]; for same period last year, at the rate of 30 per cent.

Pataling Rubber Estates Syndicate, Limited.—Interim dividend of 2 shillings per share was payable October 21—being 10 per cent. on the capital. Total dividends last year, 30 per cent.

Bukit Rajah Rubber Co., Limited.—Interim dividend of 10 per cent. on the ordinary share capital was payable on November 25. The interim dividend last year was 5 per cent. and the total dividend for the year 30 per cent.

## CAMPHOR CULTURE.

THE culture of camphor is also attracting the attention of several planters in Ceylon. The Brambrakelly Estates Tea Co., of Ceylon, Limited, are planting 15 acres this year and intend planting 119 acres altogether.

The production of camphor has now reached 4,800,000 kilograms [= 10,560,000 pounds] a year, of which it is estimated that 70 per cent. is used for celluloid. Germany leads in the consumption, with the United States second.

## RUBBER NEWS IN MALAYA.

A SPECIAL telegram to The Malay Mail, of Kuala Lumpur, from its correspondent at Singapore, under the head "The Rubber Situation," says: "Shares remain quiet, and it is hoped that American legislation will have a good effect on the demand for rubber."

RUSSIA exported rubber footwear to Germany in 1905 to the value 2,131,000 rubles [= \$1,097,465] and in 1906 to the value of 1,387,000 rubles [= \$714,305].



Established 1880

---

Philadelphia  
Rubber Works  
Reclaimed  
Rubber

Philadelphia  
U. S. A.

---

Foreign Representatives:

For Great Britain  
Kuhn & Co.,  
31, Lombard Street, London, E. C.

For the Continent  
H. P. Moorhouse,  
29, Rue des Petites-Écuries, Paris.

# Double and Single End Spreaders, Doubling Machines, Churns etc.

Write for Catalogue and Prices

## AMERICAN TOOL AND MACHINE CO.

109 Beach St. BOSTON, MASS.

### Pirelli & Co.

MILAN, (Italy)

General India Rubber, Guttapercha and  
Asbestos Manufacturers  
ELECTRIC WIRES AND CABLES

Works in Milan—Spezia & Villanueva y Geltru, (Spain)

Export: Agencies in all leading Countries  
Grand Prize and 2 Gold Medals. St. Louis, 1904

**GRAND PRIZE FOR TIRES**  
Hors Concours for the other Branches

Milan, 1906

Mention The India Rubber World when you write.

### STEAM PRESS

FOR

**Mechanical Goods.**

HYDRAULIC

OR

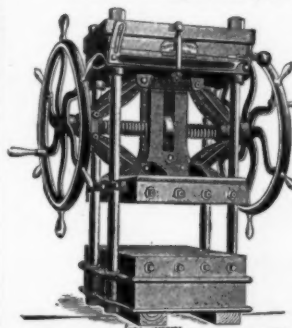
**KNUCKLE JOINT.**

Write for Prices.

**Boomer & Boschert Press Co.**

336 West Water St.,

SYRACUSE, N. Y.



Mention The India Rubber World when you write.

# THEY WON OUT



**JOHN ROYLE & SONS,**  
TUBING AND INSULATING MACHINERY

After a most critical examination of the different makes on the market a prominent firm recently placed with us a large order for an equipment of our Perfected Insulating Machines. The examination covered all points—construction of the machines, quantity of output, etc. You are sure of the best when purchasing a Royle.

Printed information and prices on request.

**Paterson, N. J., U. S. A.**  
DeLASKI CIRCULAR LOOM



## Acid Proof, Alkaline Proof, Electrolysis Proof.

NO PITCH  
NO TAR  
NO ASPHALTUM

A pure natural Hydro-Carbon, elastic, resilient product, is being used extensively in Hose packings, moulded goods, carriage drills, wire covering, Hard Rubber, and various other purposes.

**RAVEN MINING COMPANY,** Marquette Bldg.,  
CHICAGO

*Mention The India Rubber World when you write.*

## CONTINENTAL RUBBER WORKS

Hose All Kinds  
Packing All Kinds  
Tubing All Kinds  
Molded Goods  
Tires All Kinds  
Diaphragms All Kinds  
Gaskets All Kinds  
Washers All Kinds  
Sash & Channel Rubbers

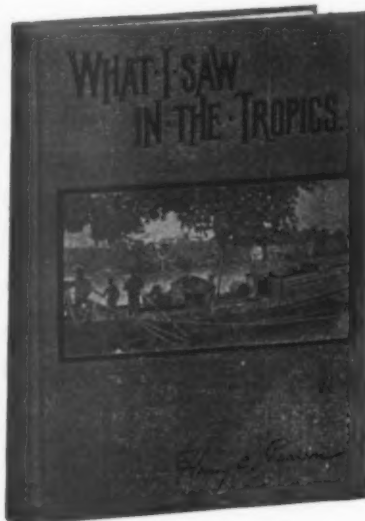


OFFICE AND WORKS, ERIE, PA.

Band Saw Bands  
Channel Rubbers  
Dredging Sleeves  
Horse Shoe Pads  
Packer Rubbers  
Plumber Rubbers  
Truck Wheel Covers  
Typewriter Flatens  
Valves

HIGH CLASS RUBBER GOODS

**LIVESEY & CO., Ltd.**  
IMPORTERS OF **CRUDE RUBBER**  
L. BLITZ, Manager. Tel. 3480 BROAD 5 HANOVER STREET, NEW YORK



### A Book for Rubber Planters

PRICE THREE DOLLARS

THE INDIA RUBBER PUBLISHING CO.

35 West 21st Street, New York

## STEPHEN P. SHARPLES

ANALYTICAL AND CONSULTING CHEMIST

Twenty-five Years' Experience in  
Methods for Recovering Rubber  
from Waste.

Analysis Made of Compounded  
Rubbers

OFFICE:

No. 26 Broad Street, Boston, Mass.

A MAGAZINE OF TROPICAL PLANTING.

## L'Agriculture des Pays Chauds

Monthly Bulletin of JARDIN COLONIAL de France and of the Experimental Stations in the Colonies. Organ of the Ministry of the Colonies—Inspection general of Colonial Agriculture. Record of Official Regulations, Decrees, etc. Special and Authentic Articles on Various Tropical Cultures. Prominent Attention to INDIA-RUBBER.

Annual Subscription: 20 francs (\$4).

**AUGUSTIN CHALLAMEL**

17, Rue Jacob, PARIS, FRANCE



# FARREL FOUNDRY AND MACHINE CO.

ANSONIA, CONN., U. S. A.

LARGEST MANUFACTURERS IN THE WORLD OF  
**RUBBER MACHINERY**

ESTABLISHED  
1848

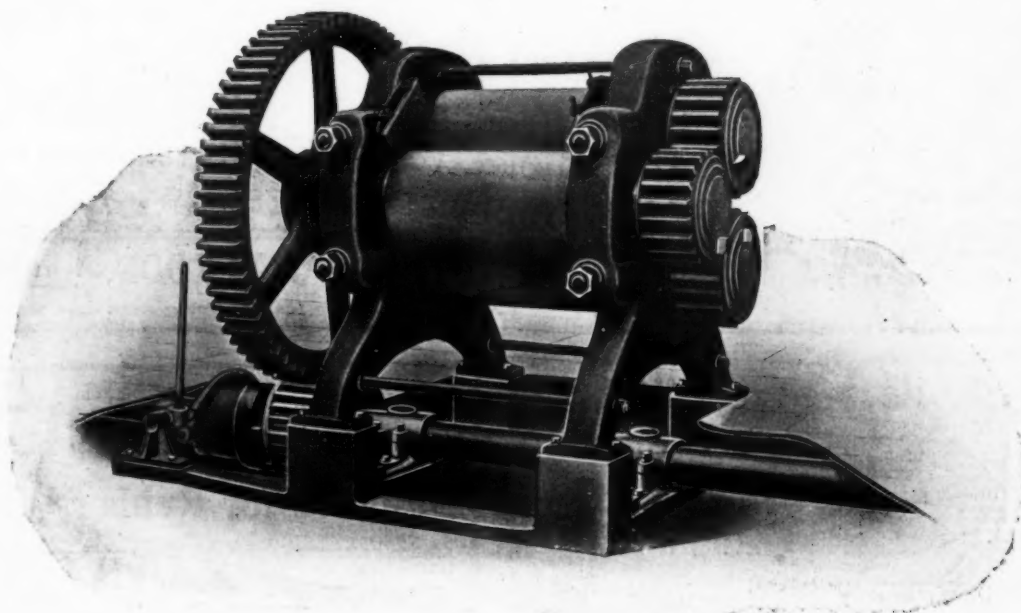
**FRANKLIN FARREL,**  
*President*

**FRANK E. HOADLEY,**  
*Secretary*

**CHARLES F. BLISS,**  
*Treasurer*

**ALTON FARREL,**  
*Assistant Treasurer*

Cable Address:  
FARREL, ANSONIA



STANDARD THREE-ROLL RUBBER WASHER

RUBBER CALENDERS for all purposes  
RUBBER GRINDERS, single and double-gear—  
any size  
RUBBER WASHERS and CRACKERS, 2 and 3-  
Roll, single and double-gear  
REFINERS—WARMERS  
HYDRAULIC PRESSES, all sizes, any number of  
Platens, for Mould Work, Matting and Belts,  
Hydraulic Stretcher and Hydraulic Clamps  
SPECIAL PRESSES for making Endless Belts  
EXPERIMENTAL OUTFITS

ROLLS, Chilled Iron, Dry Sand, and Steel (for engraving)

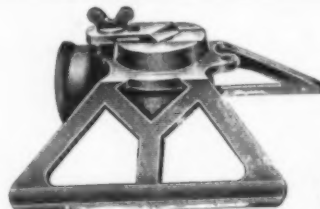
COIL FRICTION CLUTCHES (Patented)

SHAFTING, PEDESTALS, MACHINE-CUT, MACHINE-MOULDED and PATTERN GEARS

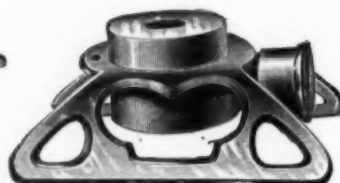
LINOLEUM and CELLULOID MACHINERY

FABRIC DRYING and SLITTING MACHINES  
SPREADERS  
PUMPS  
ACCUMULATORS, FITTINGS, Etc.  
HOSE MACHINES  
CAM PRESSES  
STRAINING and TUBING MACHINES  
BELT-MAKING MACHINES  
COMPLETE MECHANICAL, SHOE and RE-  
CLAIMING PLANTS

Mention The India Rubber World when you write.



(Pat. April 6, 1897.) Other Pats. Pending.



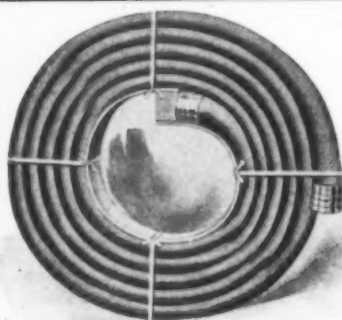
(Patented April 6, 1897.)



(Patented Oct. 1, 1901.)

**LAWN SPRINKLERS**

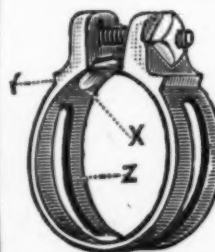
ASK

**W. D. ALLEN MFG. CO.,****CHICAGO, ILL.**

This **HOSE CORE** obviates all possibility of damage to hose in shipment and prevents chafing by brass couplings. Made in all sizes and adapted to every class of hose.

**THE ALDERFER CRATE CO.**

SHARON CENTRE, OHIO.

**Yerdon's Improved Double Hose Band****SIMPLE, STRONG, SURE**

SEND FOR SAMPLE AND PRICES

**WILLIAM YERDON, Fort Plain, N. Y.***Mention The India Rubber World when you write.***Hand Rollers and Stitchers**

OF ANY DESCRIPTION

ROLL  
ENGRAVING,  
CUTTING DIES,  
MOLDS, Etc.

**THE HOGGSON & PETTIS MFG. CO.,**  
NEW HAVEN, CONN.*Mention The India Rubber World when you write.***THE WILLIAMS FOUNDRY & MACHINE CO.**  
AKRON OHIO**Manufacturers of Rubber Machinery**Automobile, Bicycle and Steam Jacketed Vehicle Tire  
Moulds a Specialty*Mention The India Rubber World when you write.*Established  
1897.**JOHN J. ADAMS**

Successor to A. M. HOWE

**CUTTING DIES**

of Every Description

**FOR RUBBER**

81-85 Mechanic St., Worcester, Mass.

**Special Machines**  
**Designed for Rubber Workers**

EXPERIMENTAL MACHINERY  
DESIGNED OR CONSTRUCTED  
.... FROM DESIGNS ....

**WELLMAN COMPANY**  
**MEDFORD, MASS.**

A. M. STICKNEY, President

EDWARD BROOKS, Treasurer

*Mention The India Rubber World when you write.*

# THE MANUFACTURED RUBBER CO. RECLAIMED RUBBER

## OUR BRANDS:

"Lafayette" "William Penn"  
"Franklin"

Office: 409 Pennsylvania Building,  
PHILADELPHIA, PA.

Works: METUCHEN, N. J.

*Mention The India Rubber World when you write.*

# High Grade Reclaimed Rubber

Our brand "Viking" when cured with 6 per cent. of Sulphur will stretch from 2 inches to 9½ inches, and when tested according to the "Master Car Builder's" specifications 2 inches will stretch to 8 inches with a permanent elongation of ¼ inch.

**The Eastern Reclaimed  
Rubber Company**  
World Building: New York

*Mention The India Rubber World when you write.*

**A. SCHRADER'S SON, Inc.,**

28-32 ROSE ST., NEW YORK CITY.

Manufacturers of

**SCHRADER UNIVERSAL VALVES**

for Pneumatic Tires:

Schrader's Stopple and Combination Syringe Connection  
for Hot Water Bottles:

Schrader Pillow Valves for Pillows, Life Preservers  
and similar articles:

Hose Couplings, Contracted Ferrules for Garden Hose:  
Bands and Fittings:

Shower Bath Sprinklers, Shower Rings:

Brass Fittings for Rubber Goods of Every Description:  
Diving Apparatus.

**FURNISHERS OF DIVING APPARATUS  
TO UNITED STATES NAVY.**

*Mention The India Rubber World when you write.*

**THE ALADDIN RUBBER CO.**

Manufacturers of strictly HIGH GRADE

**RECLAIMED RUBBER**

BY A NEW PROCESS

DOES NOT HARDEN WITH AGE. RESILIENCY PRESERVED  
CORRESPONDENCE SOLICITED.

420 Hamilton Building, - - - AKRON, O.

*Mention The India Rubber World when you write.*

**The S. & L. Rubber Company**

Manufacturers of



The highest grade made from Old Rubber Boots and Shoes.  
No Foreign Stock Used.

**CHESTER, - - - PA.**



ESTABLISHED 1850  
**HAGEMEYER & BRUNN**  
 COMMISSION MERCHANTS  
 AGENTS LINHA DE VAPORES PORTUGUEZES  
**IMPORTERS OF CRUDE RUBBER**  
**PARA, MANAOS AND BENGUELLA**  
 NO. 9 STONE STREET, NEW YORK

**ROBERT L. CROOKE**  
 101 Beekman Street, New York  
 Purchaser of Scrap Metals and Drosses Containing  
 Tin, Lead, Antimony or Copper

WE ARE LARGE OPERATORS IN  
**RUBBER SCRAP**  
 WE BUY RIGHT AND SELL RIGHT  
 Get our prices and offers before buying or selling  
**GORDON & ROSENTHAL**  
 TRENTON, NEW JERSEY.

**"The Original Scrap Rubber House"**  
 ESTABLISHED IN 1868.  
 Largest Operators in the United States  
 WRITE FOR PRICES  
**J. LOEWENTHAL & SONS,** 736 South Sagamon St.  
 CHICAGO, ILL.

**TRENTON**  
**SCRAP RUBBER SUPPLY CO.**  
**BUY RUBBER SCRAP SELL**  
**TRENTON, NEW JERSEY**  
 Mention The India Rubber World when you write.

WE ARE EXTENSIVE DEALERS IN  
**RUBBER SCRAP**  
 WE BUY RIGHT AND SELL RIGHT  
**MEYER BROS.,** 234-S No. Front Street  
 PHILADELPHIA  
 Branch House, 518-24 So. Main Street, Wilkesbarre, Pa.

**WASTE RUBBER**  
**E. PARSE & BRODSKY**  
 128, Rue de la Tulipe - ANTWERP  
 Cable Address: Eparse-Anvers A. B. C. Code, 5th Edition, Liebers Code

**M. KAUFMAN**  
**ALL KINDS RUBBER**  
 Ship Us "We Treat You Right"  
**200 MICHIGAN STREET, CHICAGO**

**THE TRENTON RUBBER RECLAIMING WORKS**  
 N. LONDON, Prop.  
 Factory: Trenton, N. J. Office: 31 Peck Slip, New York, N. Y.  
 Cable Address: Enlondon, New York. Liebers Code Used.  
**RECLAIMED RUBBER AND ASSORTED**  
**SCRAP RUBBER OF ALL KINDS AND GRADES**  
 European Representatives: S. & M. Oppenheimer, Frankfurt, a/M., Germany

**M. BERZEN & CO.**  
 Office and Warehouse, 226 Front St. Storehouse, 144 South St.  
**NEW YORK**  
**SCRAP RUBBER BOUGHT and**  
**— SOLD —**  
 WRITE for PRICES

**ALBERT A. MOERS**  
 24 Stone St., 59 Pearl St., New York City  
 Telephone 881-832 Broad. Cable Address: Metalmoers, Lieber Code Used.  
 Agent, Dealer. Import and Export Scrap Rubber  
**Import of Galoshes a Specialty**  
 CORRESPONDENCE SOLICITED

**S. BIRKENSTEIN & SONS**  
 BUY AND SELL  
**All kinds of RUBBER SCRAP**  
 64-74 Ontario St., CHICAGO  
 Mention The India Rubber World when you write.

Phone 308 Charlestown.

CABLE ADDRESS, "NORTONCO-BOSTON." Codes A. B. C., 4th and 5th Edition.

Phone 196-5 Medford.

**M. NORTON & CO.**  
**New, Old, Cured and Uncured**  
**RUBBER SCRAP.**  
 217 Rutherford Avenue CHARLESTOWN, Mass. Storehouse: Medford.  
 ALL KINDS SECOND HAND  
**RUBBER MACHINERY**  
 BOUGHT AND SOLD.

IMPORT. **L. ALBERT & SON** EXPORT.  
 DEALERS EXCLUSIVELY IN  
**SCRAP RUBBER**  
 AKRON, O. TRENTON, N. J.  
 CORRESPONDENCE SOLICITED.

**HANS L. GREEN & CO.**  
 110-116 Nassau Street, New York, N. Y., U. S. A.  
**SCRAP RUBBER**  
 Representing Leading European Dealers

Established 1873.

Cable Address,  
UNITOSQUE.

P. O. Box 732.

# WM. H. CUMMINGS & SONS

## BUY AND SELL RUBBER SCRAP.

54-56 Harrison Street, New York, U. S. A.

# THEODORE HOFELLER & CO.,

Nos. 98-100-102-104-106-108 TERRACE, BUFFALO, N. Y., U. S. A.

FOREIGN AND DOMESTIC CORRESPONDENCE SOLICITED.

Cable Address, HOFELLER, BUFFALO.

A. B. C. and Lieber's Codes Used.

## LARGEST DEALERS IN OLD RUBBER IN THE WORLD.

# E. BERS & CO.,

ESTABLISHED 1890.

CABLE ADDRESS: BERSANDO, PHILA.

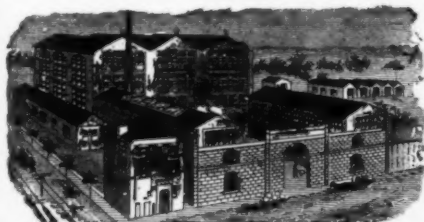
CODES { A. B. C. 4TH AND 5TH EDITION  
LIEBER'S  
PRIVATE

ALWAYS OPEN FOR ORDERS NO MATTER HOW LARGE OR SMALL.

PHILADELPHIA AND NEW YORK.

FOREIGN AND DOMESTIC CORRESPONDENCE SOLICITED.

# SCRAP RUBBER.



# J. SCHNURMANN

We Supply Manufactur-  
ers All Over the World.

London, N. England

## Rubber Scrap Only

## FELIX SALOMON & CO.,

140 Nassau Street  
NEW YORK CITY

Correspondence Invited

Representatives for U. S. A. and Canada

# SCHWAB & CO.

CABLE ADDRESS: IDACON.

CODES: A. B. C. 4th &amp; 5th EDITION.

## BUY AND SELL RUBBER SCRAP.

### 418 & 420 SOUTH FRONT ST., PHILADELPHIA, PA., U. S. A.

Cable: RANCHMEN, LONDON  
Codes: A B C and LIEBER'S

# A. W. LESLIE,

## Waste Rubber Gutta-Percha Ebonite, Etc.

119 Stoke Newington Road

LONDON N., ENGLAND

(A few minutes from Dalston Junction)

CORRESPONDENCE SOLICITED

Mention The India Rubber World when you write.

# THE MITZEL RUBBER CO.

AKRON, O., U. S. A.

Factory, Carrollton, O.

## HIGH GRADE SEAMLESS, SEAMED AND MOULDED GOODS

Goods for Customers exclusively a Specialty

ALL GOODS GUARANTEED

Write for Samples and Prices

Mention The India Rubber World when you write.

# PHILIP McGRORY,

TRENTON, N. J.

## Wholesale Dealer in SCRAP RUBBER

THE HIGHEST CASH PRICE PAID FOR NEW AND OLD, CURED AND UNCURED  
SCRAP RUBBER OF ALL KINDS.

## Second-Hand Rubber Mill Machinery Bought and Sold

Mention The India Rubber World when you write.

# P. BROOMFIELD & CO. - BOSTON, MASS.

Largest Dealers and Graders in New England of

# SCRAP RUBBER

OF EVERY DESCRIPTION

# PURE OXIDE of ZINC

Specially Prepared for Rubber Manufacturers' Use

**"SPECIAL"**  
**"XX RED"**

Caution: Be sure the brand is stencilled in red

**THE NEW JERSEY ZINC COMPANY**

71 BROADWAY, NEW YORK CITY

**George W. Speaight,**

MANUFACTURING  
CHEMIST

Headquarters for Bi-Sulphide of Carbon, Tetra Chloride of Carbon, Alcannin Paste  
LEADING MANUFACTURER OF CHLORIDE OF SULPHUR

Delivered in lead lined drums of 1800, 600 and 100 pounds capacity, and in 5 gallon stone jugs and 9 pound bottles. Lowest Prices. Prompt Deliveries.

FACTORY AND OFFICES: 248-250-252-254-256 NORTH TENTH STREET, BROOKLYN, N. Y.

**G. VAN DEN KERCKHOVE**

20, Rue de la Ferme, Brussels, Belgium

CONSULTING INDIA-RUBBER EXPERT  
CONSULTING RUBBER-PLANTING EXPERT

Fumero V. D. K. (patented). Apparatus for coagulating latex by smoking.

Rubber Tapping Knife V. D. K. (patented). For use on all kinds of rubber trees and vines.

Traveling Box (portable). For rubber explorers; fitted with apparatus, tools and ingredients for tapping rubber plants and coagulating latex by various methods.

✉ CORRESPONDENCE SOLICITED ✉

**. PURE .**  
**SOFT**  
**SULPHUR**

ESTABLISHED 1841. INCORPORATED 1897

**Bergen Port  
Sulphur Works**

ORIGINAL MANUFACTURERS  
OF

**PURE SOFT SULPHUR**

PREPARED ESPECIALLY FOR  
Rubber Manufacturers.

**T. & S. C. WHITE CO.,**  
28 Burling Slip, NEW YORK.

Mention The India Rubber World when you write.

Mme. J. LEFRANT & CO., HAM (Somme), FRANCE

**HIGH-GRADE FRENCH RUBBER SUBSTITUTES**

QUALITY UNSURPASSED

FREE FROM ACIDS

GUARANTEED NOT TO VARY

Sole Agent for United States and Canada

**CONSTANTINO P. DOS SANTOS**

PRODUCE EXCHANGE

NEW YORK



**THE STOCKTON RUBBER COMPANY,**  
 BELL TELEPHONE.  
 POSTAL TELEGRAPH.  
**STOCKTON, NEW JERSEY, U. S. A.**  
**Manufacturers of all kinds of RECLAIMED RUBBER**  
**D. J. PRICE, Superintendent and General Manager**  
*Mention The India Rubber World when you write.*

W. J. CORBETT, President and Treasurer.

J. C. WALTON, Secretary

**THE DANVERSPORT RUBBER COMPANY,**  
**BOSTON, MASS., U. S. A.**  
**RECLAIMED RUBBER.**

STRAIGHT GOODS.

NO ADULTERANTS.

Washing, Reclaiming and Grinding Solicited.

Mill at Danversport, Mass.

Office: 239 &amp; 241 A Street, Boston

TELEPHONE, 241 MAIN.

**NEW JERSEY RUBBER COMPANY,**  
 MANUFACTURERS OF ALL KINDS OF  
**RECLAIMED \* RUBBER,**

Auxiliary Plant for Trimmings, daily Capacity of 20,000 Pounds. Total daily Capacity 45,000 Pounds.

Office and Factories, LAMBERTVILLE, NEW JERSEY.

*Mention The India Rubber World when you write.*

A. W. PAICE, President.

DERMOT McEVROY, V. Pres. and General Manager.

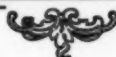
CHARLES N. DOWNS, Sec'y and Treas.

**THE DERBY RUBBER CO.**  
 MANUFACTURERS OF  
**RECLAIMED RUBBER**

Main Office, DERBY, CONN. Factories, SHELTON, CONN.

*Long Distance Telephones.*

**WESTMORELAND RUBBER MFG. CO.**  
**G R A P E V I L L E , P A .**



MANUFACTURERS OF  
**HIGH GRADE RECLAIMED RUBBER**

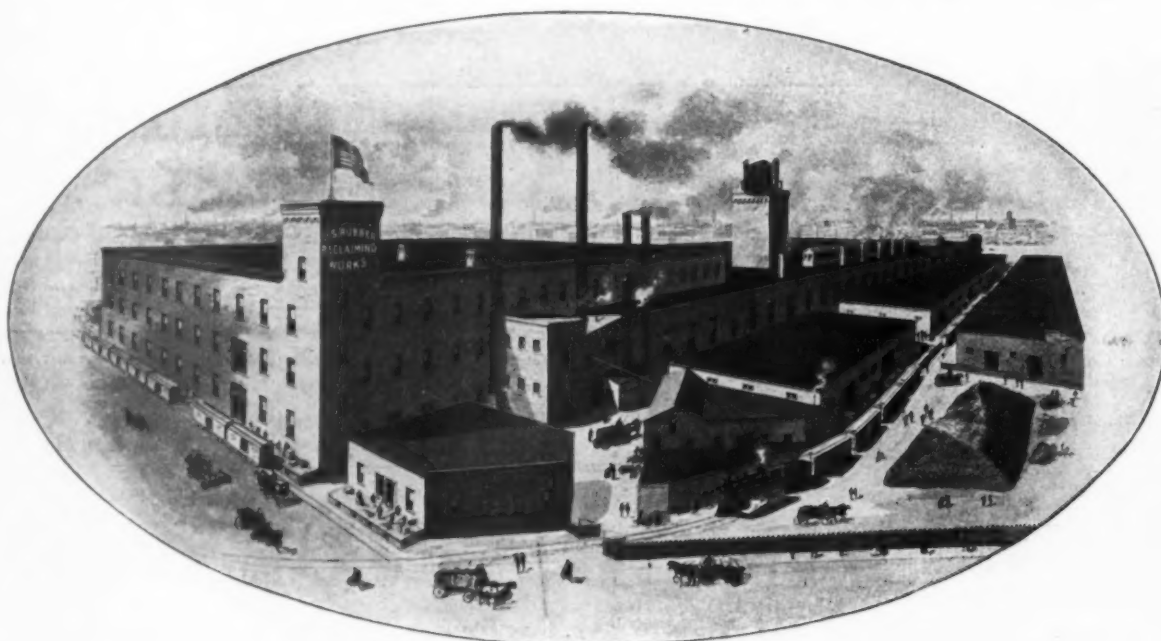
THEO. S. BASSETT, President.  
MAX LOEWENTHAL, Treasurer.

R. A. LOEWENTHAL, Vice-President.  
THEO. W. BASSETT, Secretary.

# U. S. Rubber Reclaiming Works

Manufacturers of

## RECLAIMED RUBBER



FACTORY AT BUFFALO, NEW YORK

Offices: No. 127 DUANE STREET, NEW YORK, U. S. A.

EUROPEAN REPRESENTATIVES

**MEYER & BUSSWEILER, Ltd.**

LONDON.

LIVERPOOL

*Mention The India Rubber World when you write.*

# HOT WATER BOTTLES

## RUBBER DRUGGISTS' SUNDRIES

TENNIS SHOES

INSULATED WIRE

CARRIAGE CLOTH

NURSERY SHEETING

MOLD WORK and MECHANICAL RUBBER GOODS

# National India Rubber Co.

BOSTON: 101 Milk St.

NEW YORK: 42 Broadway

BALTIMORE: 37 Hopkins Place

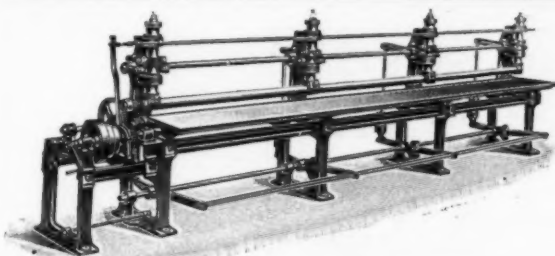
FACTORY at

CHICAGO: 84 Lake St.

BUFFALO: 379 Washington St.

PITTSBURG: 913 Liberty Ave.

BRISTOL, R. I.



EQUAL PRESSURE THE WHOLE LENGTH

## Rubber Gutta and Balata Machinery IN ALL ITS BRANCHES

100 PAGE CATALOG FREE

N. B. This machine represents our patent wrapping machine for making air tubes for motor tires, hose, piping, etc. Made up to 100 feet long.

PATENTEES AND SOLE MAKERS

**DAVID BRIDGE & CO.**

Peer Works Castleton, Manchester, England

Canadian Representative, Mr. Joseph Hollins, 160 Bay Street, Toronto, Ont.

Please send for our catalog in English, French and German

## SYRINGE BOXES

Of WHITE WOOD, BASS, OAK, ASH, Etc.

FINE WORK. LOW PRICES. PROMPT SHIPMENT.

Estimates and Samples Furnished on Application.

ALSO ANY OTHER KIND OF

## FANCY WOOD BOXES MADE TO ORDER

Extensive Facilities enable us to Guarantee Satisfaction.

**HENRY H. SHEIP MFG. CO.**

6th St. and Columbia Ave., Philadelphia, Pa.

Mention The India Rubber World when you write.

## WHITE AND BLACK Rubber Substitutes

OF SUPERIOR QUALITY

**ROBERT E. TYSON, Fairfield, Conn.**

SEND  
FOR  
INDEX

A copy of the Index to Crude Rubber and Compounding Ingredients may be had for the asking. Write for it if you are interested

**INDIA RUBBER PUBLISHING CO.**  
395 Broadway New York

**LASTS** FOR RUBBER SHOES **LAST**  
MIDDLESEX LAST CO. Boston, Mass., U. S. A. **DESIGNING**  
A SPECIALTY





## Eighty Pages on Lubrication

The actual experience of practical men and the scientific experiments of learned authorities are concentrated in Dixon's latest book, "Graphite as a Lubricant," tenth edition. Every one interested in machinery will find lots

of valuable information in this attractive volume. Sent free to those interested—write for copy 180-C.

**Joseph Dixon Crucible Co., Jersey City, N. J.**

## Special Notice TO THE Rubber Planting World

### PARA, CASTILLOA, CEARA, ETC.

Seeds and stumps forwarded to all parts of the World. Orders being booked from Planters, Merchants, Govt. Botanical and Agricultural Departments, Officials, Consuls, Missionaries, Lawyers, etc., from all parts of the Globe.

The Chief of a Botanical and Scientific Department who bought a large quantity of Para and Castilloa seed from last two crops, writes, 10th November, 1906: "We may however want a large quantity of seeds next year, both of Castilloa and Para. I shall be obliged if you will quote me your lowest possible price for both Para and Castilloa in quantities of 250,000, 500,000, 750,000 and 1,000,000."

The Director of a Govt. Experiment Station, Honolulu, writes, December 15th, 1906: "Yours of October 15th at hand; the 23 packages Castilloa Elastica seed came about three weeks ago, and are of good quality, nearly all having germinated."

Special offer of seeds and stumps, with circulars, on view at the office of this paper and post free on application.

Seeds of celebrated Caravonica and Spence Cotton. For green manuring, Crotalaria Striata, Vigna, Groundnuts, etc. Price on application. See further particulars in our advertisement in this paper, page 41.

Telegraphic Address: J. F. WILLIAM & BROS.,  
William, Henaratgoda, Ceylon. Tropical Seed Merchants,  
Liber's, A.I. and A.B.C. Codes used. Henaratgoda, Ceylon.  
Also private codes.

Mention The India Rubber World when you write.

## DERMATINE

Registered U. S. A. Patent Office No. 50018.



In the form of Belting, Hose Valves, Steam Joints and Hydraulic Rings is specially stipulated for by the British and Continental Governments; Chief Corporations and Municipalities throughout Europe; also the Chief Engineers and Chemical Manufacturers

throughout the world. Stands rough wear and usage, heat, cold, damp, oils and acids, better than leather, rubber or gutta-percha.

**THE DERMATINE COMPANY, Ltd.**

95 Neate Street, LONDON, S. E.

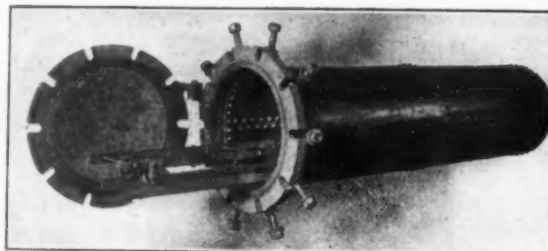
Mention The India Rubber World when you write.

## WILLIAM R. THROPP

Manufacturer of

Rubber Washers, Grinders, Warmers,  
Sheeters, Refiners and Calenders  
AUTOMATIC JAR RING CUTTING LATHES  
Hydraulic, Steam and Knock Screw Presses  
IMPROVED DUCK SLITTERS  
Vulcanizers of all diameters and lengths  
Automobile & Vehicle Moulds a Specialty  
MOULDS AND SPECIAL MACHINERY  
**TRENTON, N. J., U. S. A.**

Mention The India Rubber World when you write.



Manufacturers of Washers, Crackers, Grinders, Vulcanizers, Hydraulic Presses and Knock Screw Presses, Jar Ring Lathes, Automobile and Vehicle Tire Moulds and Special Moulds of all kinds.

Write for Photos and Prices of Machines

## JOHN E. THROPP'S SONS CO.

TRENTON, N. J., U. S. A.

Mention The India Rubber World when you write.

## VULCANIZING PRESSES

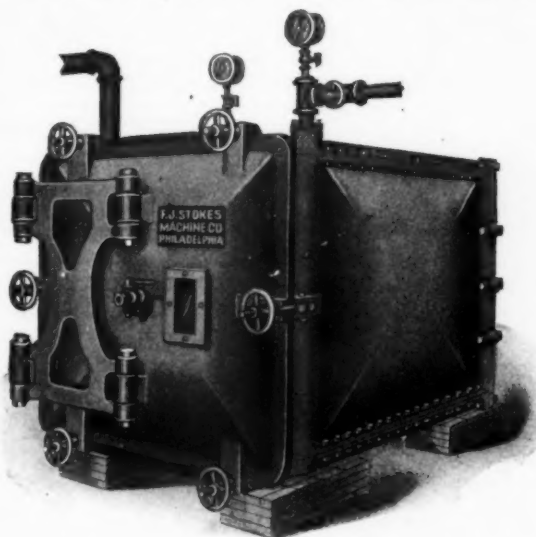


WILLIAM R. PERRIN & COMPANY, CHICAGO.

The number of pairs of rubber boots and shoes exported during eleven months ending November 30, was 2,949,632, against 2,059,881 pairs in eleven months of 1906 and 2,185,437 in the same period of 1905.

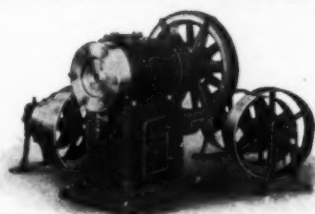
Exports of scrap or waste rubber during November, 1907, amounted to 3,847,384 pounds of the value of \$556,327. Exports of reclaimed rubber, 3,804,397 pounds, valued at \$581,224, or an average of 15.28 cents per pound.

**Q** Reduce your *interest* and *insurance* charges by using a **VACUUM DRIER**. It will save its cost in one year in these two items alone.



WRITE US FOR PARTICULARS

**F. J. Stokes Machine Co.**  
17th and Cambria Streets  
PHILADELPHIA



**Tubing  
and Straining  
Machines  
Tile Grinding  
Machines  
Presses**

**Molds of all Kinds**

**BAY STATE MACHINE CO.**

1306 PEACH STREET . . . . ERIE, PA.

## Embossing Calenders

For Artificial Leather, Table Oil Cloth,  
and Carriage Covers.

## Drying Machines

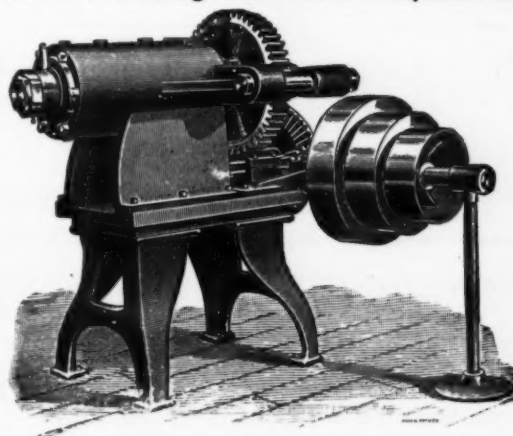
with Copper Cylinders for Cotton Duck,  
Drills and Sheeting.

**THE TEXTILE-FINISHING MACHINERY CO.,**  
PROVIDENCE R. I.

Southern Agent, **STUART W. CRAMER,**  
Trust Bldg., Charlotte, N. C. Equitable Bldg., Atlanta, Ga.  
*Mention The India Rubber World when you write.*

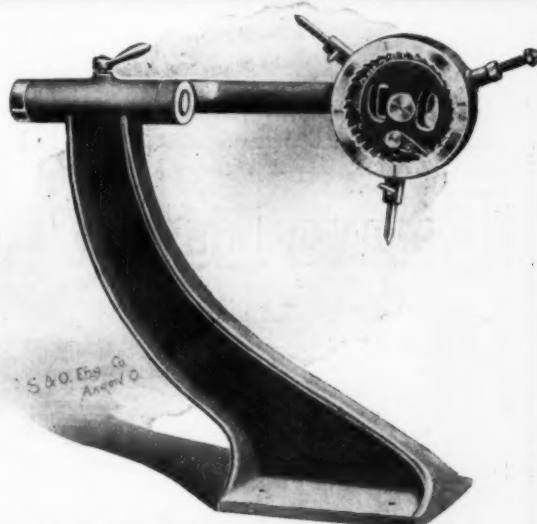
## CLARK'S Reliable Tubing Machine

FOR THE MANUFACTURE OF RUBBER TUBING AND CORD,  
And also the Covering of Electrical and Telephone Cables.



MANUFACTURED IN 4 SIZES BY

**EDRED W. CLARK, MACHINIST,**  
Rubber Moulds and Rubber Machinery,  
Screw and Hydraulic Presses a Specialty  
Nos. 12-14 WELLS STREET, HARTFORD, CONN.  
*Mention The India Rubber World when you write.*



ADAMSON UNIVERSAL TIRE BUILDING STAND.  
[Instantly adjusted for any size core. Ball bearing. Rigid, simple, and occupies little space. Manufactured by A. Adamson, Akron, Ohio.]

**A. ADAMSON**  
**Rubber Working Machinery**  
AKRON, OHIO, U. S. A.

Our equipment for Automobile, Carriage and Bicycle Tire mold work is the largest in the country. Prompt delivery, first-class workmanship and satisfactory prices. We also build Hydraulic Presses, Accumulators, Tubing Machines, Mills, Small Calenders and numerous special machines. Write for prices.

*Mention The India Rubber World when you write.*

## THE ALUMINUM FLAKE COMPANY

MINERS AND REFINERS OF **ALUMINUM FLAKE**

Physical condition remarkable.  
Base, Metallic Aluminum 48%  
Gravity 2.58

**It toughens Rubber, gives it life and lightens gravity**

**ABSOLUTELY INERT**

**THE ALUMINUM FLAKE COMPANY, AKRON, O.**

A distinct substitute for zinc in part or whole, in all lines of Rubber Manufacture.

## The Carter Bell Mfg. Co.

150 Nassau Street, New York

**WHITE and BLACK**

## Rubber Substitutes

## Massachusetts Talc Co.

Miners and Millers of High Grade Domestic

## TALC AND SOAPSTONE

Samples and Quotations Submitted for Immediate and Future Deliveries

OFFICES:

**6 Beacon St., BOSTON, MASS.**

Mines: ROWE, MASS.

Mills: ZOAR, MASS.

Telephone 4332 Birmingham.  
4332 Birmingham.

**THE RUBBER CHEMICAL COMPANY, Ltd.,**  
SERINGA BUILDINGS, LUDGATE HILL, BIRMINGHAM, ENGLAND.

**"ATMOID"**  
The lightest Rubber Drug known.

**"NANTUSI"**  
for vulcanising and preserving Rubber.

**SUBSTITUTES, free from Acid**  
(Seringa Brand), WHITE, DARK AND RED.

**SERINGA VULCANINE,** special Drug for Dark Rubber Goods.

**CORRESPONDENCE INVITED. WRITE FOR PRICE LISTS.**

TELEPHONE 6065 CORTLANDT.

## M. P. FILLINGHAM

CONSULTING ENGINEER

Rubber Factories Planned and Reconstructed  
Rubber Machinery Designed, Sold and Installed

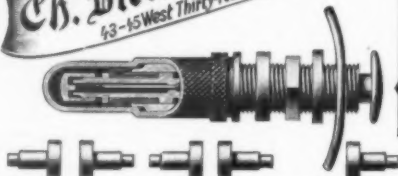
**ENGINEERING BUILDING**  
114 Liberty Street  
New York

## EDOUARD DUBIED & Co

- Couvet - Switzerland.

Agent for the  
U.S.A.

**Ch. Dien.** New-York  
The Monolith.  
43-45 West Thirty-fourth Street.



## SULPHUR

**BROOKLYN SULPHUR WORKS.**  
Manufacturers of  
Double Refined and Sublimed  
**FLOVE SULPHUR**  
Especially adapted to the use of  
RUBBER MANUFACTURERS  
AND WARRANTED FREE FROM GRIT.  
**BATTELLE & RENWICK**  
163 Front St., New York.

## Springfield Tire & Rubber Company

Manufacturers of  
MECHANICAL RUBBER GOODS, BUMPERS, SPRINGS, BABY CAR  
TIRES, TRUCK TIRES, PACKING, TUBING, SPRINGFIELD  
ABRASIVE POLISHING WHEELS AND BLOCKS, BATH  
BRUSHES, RUBBER HEELS, ETC.

14-18 North Mechanic Street, SPRINGFIELD, OHIO, U. S. A.

## CHARLES E. FARRINGTON

Consulting Chemical and Mechanical Engineer

RUBBER MILL DESIGN, EQUIPMENT AND OPERATION

**SPECIAL PROCESSES DEVELOPED**

Cable Address "Charfar" 190 High St., Boston, Mass., U. S. A.



**As a Filler**  
will make Rubber Goods that will stand Heat or Acid.

# Fossil Flour

**OXFORD  
TRIPOLI  
COMPANY**

1167 First Ave.  
NEW YORK

**THE DAYTON RUBBER MFG. CO.**  
MAKERS OF  
**Mechanical Rubber Goods**  
DAYTON, OHIO

*Mention the India Rubber World when you write.*



**THE CANTON RUBBER CO.**  
CANTON, OHIO

Manufacturers of

**FIRST CLASS SEAMLESS**

**DRUGGIST SUNDRIES and TOILET GOODS**

Best facilities for

**Regular and Special Moulded Work**

Manufacturers of Rubber Specialties  
for Patentees and Large Consumers.

**THE BUFFALO RUBBER MFG. CO.,**  
BUFFALO, N. Y.

**L. & M. RUBBER WORKS,**  
CANTON, OHIO.

Manufacturers of high class druggists' sundries.  
Regular and Special work solicited.

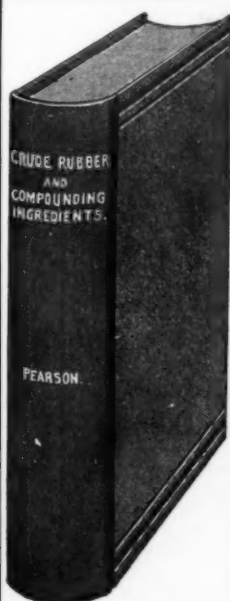
**RICKABY RUBBER  
MANUFACTURING CO.**

Manufacturers of

**RECLAIMED RUBBER**

OFFICE AND FACTORY

**South Framingham, Massachusetts**



## Crude Rubber and Compound- ing Ingredients

A Text Book of Rubber Manufacture

By HENRY O. PEARSON.

It is often a great convenience to have at hand, in convenient form for reference, a book that will remind a man of something which he needs to make use of in his work or business, without waiting to ransack his memory for it no matter how well he may once have learned it. "Crude Rubber and Compound-ing Ingredients" has been designed to serve just such a purpose. In fact, the book was a gradual development of a manuscript reference book originally compiled by the author for his personal use alone. Finding how convenient it was to be able to turn to such a book, instead of having to depend on memory alone for the information it contained, the idea suggested itself that possibly others interested in the rubber industry might find these notes equally serviceable, and this is why they have been developed into a book.

**PRICE \$10.**  
**PREPAID.**

**THE INDIA RUBBER  
PUBLISHING CO.**

## Vacuum Drying Apparatus

FOR

**Sheet and Reclaimed Rubber**  
**EMIL PASSBURG SYSTEM**

The Passburg (Patent) "VACUUM DRYING APPARATUS" is no experiment.

They are installed in all of the principal rubber manufacturing factories in this country and Europe.

300 chambers in daily operation drying rubber and rubber compounds.

Particulars upon application.

**J. P. DEVINE CO.,**

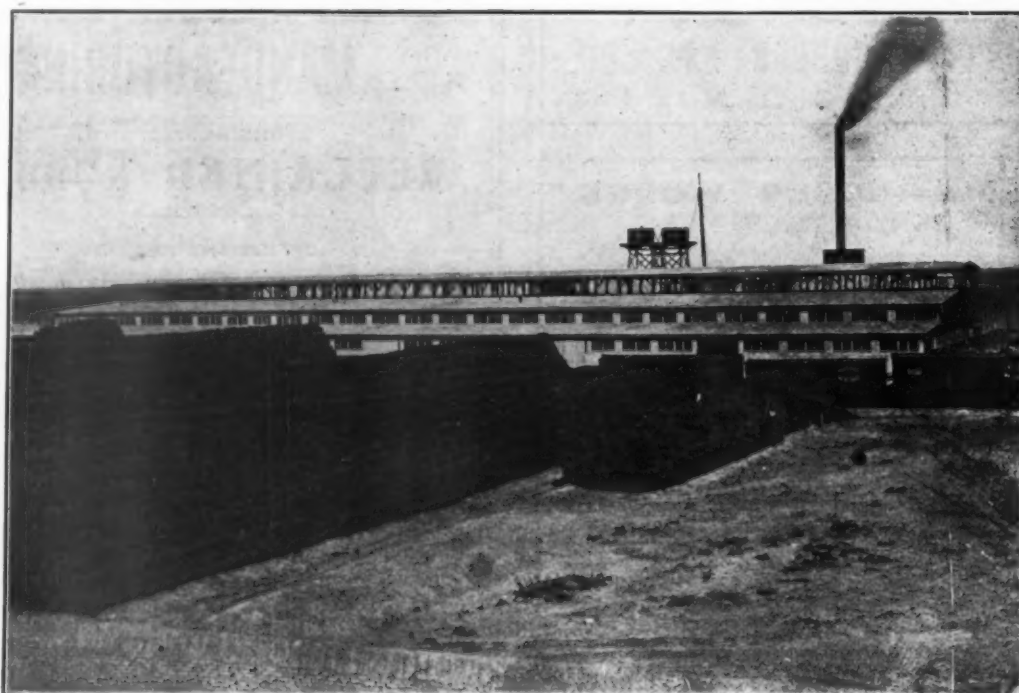
314 Mooney-Brisbane Bldg., **BUFFALO, N. Y.**

SOLE MANUFACTURING RIGHTS FOR AMERICA

# Continental Rubber Company



## GUAYULE



Stocks always on hand in New York and Mexico of  $\left\{ \begin{array}{l} \text{Circle Brand Crude Guayule,} \\ \text{Triangle Brand Crude Guayule} \end{array} \right.$   
Clean and dry—ready for compounding.

Prompt shipment and constant supply guaranteed.

Prices quoted at Company's office.

Factories:  
TORREON  
SALTILLO } Mexico,  
OCAMPO }

Offices:  
111 BROADWAY, NEW YORK.

*Mention The India Rubber World when you write.*



SPORTSMAN'S CUSHION

CAMP MATTRESS

YACHT MATTRESS

"IMPROVED CONSTRUCTION"  
"HIGHEST QUALITY" "GUARANTEED"

**AIR MATTRESSES  
and CUSHIONS**

for Physicians, Hospitals, Campers, Canoeists,  
Yachtsmen, Invalids and Home Use

Liberal Discount To Dealers    Send for Catalog

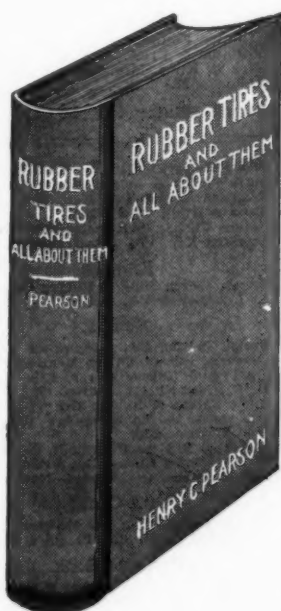
MENTION THIS PAPER AND    THE CATALOG IS SENT FREE

DOUBLE CANOE CUSHION

Comfort Sleeping Pocket

TWO PART HOUSE MATTRESS.

**METROPOLITAN AIR GOODS CO.**  
ESTABLISHED 1891  
INCORPORATED  
TRADE MARK  
READING, MASS. U.S.A.



## A BOOK FOR EVERYBODY WHO HAS TO DO WITH RUBBER TIRES FOR BUSINESS OR PLEASURE

We heartily recommend this book to the trade.—*Fahrrad und Motorfahrzeug.*

Written in a manner which enables even those who are not connected with this line of industry to readily understand it.—*Allgemeine Automobil-Zeitung.*

This work is the most thorough treatise on tire making that has come under the observation of *The Motor Way*.—*The Motor Way.*

Gives a lucid and comprehensive review of the development and the present status of rubber tire manufacturing.—*Das Radmarkt.*

There may be those who think they know all about tires that is worth while, but they will conclude differently if they will peruse this well written volume.—*Carriage Monthly.*

Designed as a help for all who have to do with tires, treating of their quality, condition, application, repair and so on, with a general survey of the present state of tire manufacture.—*Gummi-Zeitung.*

Deserves the greatest attention from the rubber trade.—*Le Caoutchouc et la Gutta-Percha.*

PRICE \$3.00 PER COPY, PREPAID  
THE INDIA RUBBER PUBLISHING COMPANY  
NUMBER 395 BROADWAY, NEW YORK



# BUYERS' DIRECTORY OF THE RUBBER TRADE.

**Classified List of Manufacturers and Dealers in India-Rubber Goods and Rubber Manufacturers' Supplies.**

## INDEX TO ADVERTISERS

A		D		K		R	
	Page		Page		Page		Page
Acme Rubber Mfg Co.	31	Danversport Rubber Co.	59	Kaufman, M.	36	Raven Mining Co.	32
Adams, John J.	34	Davidson Rubber Co.	59	Kokomo Rubber Co.	13	Republic Rubber Co.	36
Adamson, A.	43	Davol Rubber Co.	34	Kush, Gustave.	10	Revere Rubber Co.	58
Akron Rubber Engineering Co.	26	Dayton Rubber Mfg. Co.	45			Rickaby Rubber Mfg. Co.	45
Aladdin Rubber Co.	35	Derby Rubber Co.	30			Royle & Sons, John.	31
Albert & Son, L.	36	Dermatine Co., Ltd.	42	<b>L</b>		Rubber Chemical Co., Ltd.	44
Alden & Co., Geo. A.	9-23	Devine, Joseph P.	45	L & M. Rubber Works.	45	Rubber Trading Co.	21
Alderfer Crate Co.	34	Dien, Ch.	44	Lake Shore Rubber Co.	12	Rubber Products Co.	15
Alkali Rubber Co.	23	Dixon Crucible Co., Jos.	42	Lane & Co., J. H.	26		
Allen Mfg. Co.	33	Dos Santos, C.	38	Le Caoutchouc & La Gutta		<b>S</b>	
Aluminum Flake Co.	44	Dubied, Ed. & Co.	44	Percha	42	S. & L. Rubber Co.	35
American Hard Rubber Co.	13	Dunlop Tire & Rubber Goods Co.	13	Leslie, A. W.	37	Sayen, Osgood.	2
American Talc Co.	26			Livesey & Co., Ltd.	32	Scheel, Wm. H.	2
American Tool & Machine Co.	31			Loewenthal & Co., B.	37	Schnurmann, J.	37
Appleton & Son, F. H.	15	<b>E</b>		Loewenthal & Sons, J.	36	Schrader's Sons, Inc., A.	35
Ashley & Co., T. C.	10	Eastern Reclaimed Rubber Co.	35	Luzerne Rubber Co., The.	15	Schwab & Co.	37
Atlas Chemical Co.	15	Eggestorff's (Georg) Salzworke.	29			Seamless Rubber Co.	36
		Elkhardt Rubber Works.	26	<b>M</b>		Sharples, Stephen P.	41
<b>B</b>		Empire Rubber Mfg. Co.	4	McGrory, Philip.	37	Shelf Mfg. Co., Henry H.	41
Bailey & Co., C. J.	14	Eureka Fire Hose Co.	4	Manhattan Rubber Mfg. Co.	12	Spenlight, Geo. W.	38
Battelle & Renwick.	44			Manufactured Rubber Co.	35	Springfield Tire & Rubber Co.	44
Bay State Machine Co.	43	<b>F</b>		Mason Regulator Co.	25	Stamford Rubber Supply Co.	25
Bers & Co.	37	Fabric Fire Hose Co.	4	Massachusetts Chemical Co.	168	Sterling Mfg. Co.	60
Berzen, M., & Co.	36	Farrel Foundry & Machine Co.	33	Massachusetts Talc Co.	44	Stockton Rubber Co.	39
Biggs Boiler Works Co.	8	Farrington, C. E.	44	Metropolitan Air Goods Co.	49	Stokes, F. J., Machine Co.	43
Birkenstein & Sons, S.	36	Faultless Rubber Co.	1	Mattson Rubber Co.	14	Stokes Rubber Co., Jos.	15
Birmingham Iron Foundry.	7	Fillingham, M. P.	44	Maurer, Ed.	169		
Birmingham Rubber Works	31	Flister Rubber Co.	25	Mechanical Rubber Co.	12	<b>T</b>	
Boomer & Boschert Press Co.	7			Meyer Bros.	36	Taintor Mfg. Co., H. F.	22
Boston Belting Co.	3	<b>G</b>		Middlesex Last Co.	41	Textile-Finishing Machinery Co.	43
Boston Die Co.	1	Gabriel & Schall.	29	Mitxel Rubber Co.	37	Thropp's Sons Co., John B.	42
Boston Rubber Shoe Co.	17	Goodrich, Co., B.	19	Moers, Albert A.	36	Thropp, William R.	42
Boston Woven Hose & Rubber Co.	5	Gordon & Rosenthal.	18			Trenton Rubber Mfg. Co.	8
Bowers Rubber Works.	12	Gough, Co., Wallace L.	23	<b>N</b>		Trenton Rubber Reclaiming Wks	36
Bridge, David, & Co.	41	Grasselli Chemical Co.	29	N. Tire Rubber Sponge Co.	15	Trenton Scrap Rubber Supply Co.	36
Bridgewater Machine Co.	25	Green, Hans L., & Co.	36	National India Rubber Co.	41	"Tropical Agriculturist"	39
Broomfield, P., & Co.	37	Gummi-Zeitung.	36	New England Butt Co.	11	Tyer Rubber Co.	60
Brown & Foundry Machine Co.	5	Gutta Percha & Rubber Mfg. Co.	60	New Jersey Car Spring & Rubber Co.	10	Typke & King.	60
Buffalo Rubber Mfg. Co.	45	Gutta Percha & Rubber Mfg. Co., Toronto	59	New Jersey Rubber Co.	39	Tyson, Robert E.	41
				New Jersey Zinc Co.	38	<b>U</b>	
<b>C</b>		<b>H</b>		New York Belting & Packing Co.	20	United States Rubber Co.	17
Cabot, Samuel, Inc.	1	Hagemeyer & Brunn.	36	New York Rubber Co.	8	U. S. Rubber Reclaiming Wks.	40
Canadian Rubber Co. of Montreal	56	Hirsch & Co., A.	2	North British Rubber Co.	26	U. S. Waste Rubber Co.	28
Cannfield Co., H. O.	5	Hodgman Rubber Co.	6	Norton & Co., M.	36		
Cantor Rubber Co.	45	Hoffeller & Co., Theodore.	37	<b>O</b>		<b>V</b>	
Cantor, Joseph.	44	Hoggson & Pettis Mfg. Co.	34	Oxford Tripoli Co.	45	Van der Kerckhove.	38
Carroll Bell Mfg. Co.	29	Home Rubber Co.	34			Voorhees Rubber Mfg. Co.	5
Challamel, Augustin.	32	Hood Rubber Co.	60	<b>P</b>		<b>W</b>	
Chicago Rubber Works.	20	Household Rubber Co.	15	Painesville Metallic Binding Co.	26	Wanted and For Sale.	28</

**MECHANICAL RUBBER  
GOODS.**

Belting.  
Diaphragms.  
Gaskets.  
Hose (Fire, Garden, Steam).  
Mats and Matting.  
Mould Work.  
Packing.  
Tubing.  
Valves.  
Washers.

**Mechanical Rubber Goods—General.**

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Bowers Rubber Co., San Francisco, Cal.  
Canadian Rubber Co. of Montreal.  
H. O. Canfield Co., Bridgeport, Ct.  
Chicago Rubber Wks., Chicago.  
Cincinnati Rubber Mfg. Co., Cincinnati.  
Crescent Rubber Co., Cleveland, O.  
Continental Caoutchouc & Guttapercha  
Co., Hanover, Germany.  
Continental Rubber Works, Erie, Pa.  
Dayton Rubber Mfg. Co., Dayton, O.  
The Dermatine Co., London.  
Dunlop Tire & Rubber Goods Co., Toronto.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Farrington Fire Hose Co., New York.

**Mechanical Goods—General.—Con  
tinned.**

B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Gutta Percha & Rubber Mfg. Co., To-  
ronto.  
Home Rubber Co., Trenton, N. J.  
The Indiana Rubber and Insulated Wire  
Co., Jonesboro, Indiana.  
Lake Shore Rubber Co., Erie, Pa.  
Manhattan Rubber Mfg. Co., New York  
Massachusetts Chemical Co., Walpole,  
Mass.  
Mattison Rubber Co., Lodi, N. J.  
Mechanical Rubber Co., New York.  
National India-Rubber Co., Bristol, R. I.  
N. C. Spring & Rubber Co., Jersey  
City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
North British Rubber Co., Ltd., Edin-  
burgh.  
Peerless Rubber Mfg. Co., New York.  
Pirelli & Co., Milan, Italy.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston—New York.  
Springfield Tire & Rubber Co., Spring-  
field, Mass.  
St. Stokes Rubber Co., Trenton, N. J.  
Trenton Rubber Mfg. Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.  
Western Rubber Co., Goshen, Ind.

### Air Brake Hose.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Acme Rubber Mfg. Co., Trenton.

### Air Brake Hose—Continued.

B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Horse Rubber Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey  
City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

**Belting (Canvas).**

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
Eureka Fire Hose Co., New York.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.

### Billiard Cushions.

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
Continental Rubber Works, Erie, Pa.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Manhattan Rubber Mfg. Co., New York  
Mattson Rubber Co., Lodi, N. J.  
New York Belting & Packing Co., Ltd.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston-New York.

### Blankets—Printers'

Peerless Rubber Mfg. Co., New York.  
Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.

## Blankets—Printers'.—Continued.

Gutta Percha & Rubber Mfg. Co., N. Y.  
Hodgman Rubber Co., New York.  
Gustave Kush, New York.  
Revere Rubber Co., Boston-New York.  
Voorhees Mfg. Co., Jersey City.

### Brushes.

Boston Woven Hose & Rubber Co.  
C. J. Bailey & Co., Boston.

## Buffers

Boston Belting Co., Boston-New York.  
Canadian Rubber Co. of Montreal.  
Continental Rubber Works, Erie, Pa.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co.  
of Toronto, Ltd.  
Mattson Rubber Co., Lodi, N. J.  
National India Rubber Co., Bristol, R. I.  
Reverse Rubber Co., Boston—New York.

### Card Cloths

Canadian Rubber Co. of Montreal.  
Mechanical Fabric Co., Providence, R. I.

### Carriage Mats

Continental Rubber Works, Erie, Pa.  
Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co. of Montreal.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Home Rubber Co., Trenton, N. J.  
National India Rubber Co., Bristol, E. I.

## RUBBER BUYERS' DIRECTORY—Continued.

## Carriage Mats.—Continued.

N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston—New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Cord (Pure Rubber).

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston—New York.  
Boston Woven Hose & Rubber Co., Cleveland, O.  
Continental Rubber Works, Erie, Pa.  
Davol Rubber Co., Providence, R. I.  
Dayton Rubber Mfg. Co., Dayton, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Manhattan Rubber Mfg. Co., New York.  
Mattson Rubber Co., Lodi, N. J.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston—New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Deckle Straps.

Boston Belting Co., Boston.  
Canadian Rubber Co., Montreal.  
B. F. Goodrich Co., Akron, O.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston—New York.

## Door Springs.

Hodgman Rubber Co., New York.

## Dredging Sleeves.

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston—New York.  
Boston Woven Hose & Rubber Co., Cleveland, O.  
Continental Rubber Works, Erie, Pa.  
Dayton Rubber Mfg. Co., Dayton, O.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City.  
New York Belting & Packing Co., N. Y.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston—New York.

## Force Cups.

The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Hodgman Rubber Co., New York.  
Mattson Rubber Co., Lodi, N. J.  
National India Rubber Co., Bristol, R. I.

## Fruit Jar Rings.

Acme Rubber Mfg. Co., Trenton.  
Boston Woven Hose & Rubber Co., Cleveland, O.  
Continental Rubber Works, Erie, Pa.  
Dayton Rubber Mfg. Co., Dayton, O.  
B. F. Goodrich Co., Akron, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Manhattan Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
New York Belting & Packing Co., N. Y.

## Fuller Balls.

Continental Rubber Works, Erie, Pa.  
B. F. Goodrich Co., Akron, O.  
Jenkins Bros., New York.  
Manhattan Rubber Mfg. Co., New York.  
Mattson Rubber Co., Lodi, N. J.  
National India Rubber Co., Bristol, R. I.  
N. J. Car Spring & Rubber Co., Jersey City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.

## Gage Glass Washers.

Boston Belting Co., Boston, Mass.  
Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Continental Rubber Works, Erie, Pa.  
Dayton Rubber Mfg. Co., Dayton, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Home Rubber Co., Trenton, N. J.  
Jenkins Bros., New York.  
Manhattan Rubber Mfg. Co., New York.  
Mattson Rubber Co., Lodi, N. J.  
Mechanical Rubber Co., Chicago, Ill.  
National India Rubber Co., Bristol, R. I.

N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston, Mass.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City, N. J.

## Gas-Bags (Rubber).

Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
National India Rubber Co., Bristol, R. I.  
Peerless Rubber Mfg. Co., New York.  
Tyer Rubber Co., Andover, Mass.  
Voorhees Rubber Mfg. Co., Jersey City.

## Gasket Tubing.

Boston Belting Co., Boston—New York.  
Canadian Rubber Co., Montreal.  
Continental Rubber Works, Erie, Pa.  
B. F. Goodrich Co., Akron, O.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Jenkins Bros., New York.  
Manhattan Rubber Mfg. Co., New York.  
National India Rubber Co., Bristol, R. I.  
New Jersey Car Spring & Rubber Co., New York.  
Rever Rubber Co., Boston—New York.

## Grain Drill Tubes.

Cincinnati Rubber Mfg. Co., Cincinnati, Ohio.  
Dayton Rubber Mfg. Co., Dayton, O.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Manhattan Rubber Mfg. Co., New York.

## Hat Bags.

Boston Belting Co., Boston.  
Canadian Rubber Co., Montreal.  
Continental Rubber Works, Erie, Pa.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mattson Rubber Co., Lodi, N. J.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Rever Rubber Co., Boston—New York.

## Horse Shoe Pads.

Canadian Rubber Co., Montreal.  
Continental Rubber Works, Erie, Pa.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Revere Rubber Co., Boston—New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose—Wire Wound.

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston—New York.  
Boston Woven Hose & Rubber Co., Cleveland, O.  
Canadian Rubber Co., Montreal.  
Continental Rubber Works, Erie, Pa.  
Dayton Rubber Mfg. Co., Dayton, O.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Manhattan Rubber Mfg. Co., New York.  
National India Rubber Co., Bristol, R. I.  
N. J. Car Spring & Rubber Co., Jersey City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Core.

Alderfer Crute Co., Sharon Center, O.  
Hose Pipes, Nozzles, Couplings and Fittings.

Boston Woven Hose & Rubber Co., Cleveland, O.  
Canadian Rubber Co., Montreal.  
Eureka Fire Hose Co., New York.  
Revere Rubber Co., Boston.  
A. Schrader's Son, Inc., New York.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.

## Hose Linings.

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston—New York.  
Boston Woven Hose & Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.

The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston—New York.

## Hose Racks and Reels.

Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
New York Belting & Packing Co., N. Y.  
Wirt & Knox Mfg. Co., Philadelphia.

## Hose—Rubber Lined.

## Cotton and Linen.

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston—New York.  
Boston Woven Hose & Rubber Co., Cleveland, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Canadian Rubber Co., Montreal.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Fire Hose Co., New York.  
Fabric Fire Hose Co., New York.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.

Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston—New York.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose—Submarine.

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston—New York.  
Continental Rubber Works, Erie, Pa.  
B. F. Goodrich Co., Akron, O.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Manhattan Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston—New York.  
A. Schrader's Son, Inc., New York.

## Hose Bands, Straps &amp; Menders.

Boston Woven Hose & Rubber Co., William Yerdon, Fort Plain, N. Y.

## Lawn-Hose Supporters.

C. J. Bailey & Co., Boston.

## Lawn Sprinklers.

W. D. Allen Mfg. Co., Chicago.  
Boston Woven Hose & Rubber Co., Canadian Rubber Co., Montreal.

## Mallets (Rubber).

Boston Belting Co., Boston—New York.  
Continental Rubber Works, Erie, Pa.  
B. F. Goodrich Co., Akron, O.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Manhattan Rubber Mfg. Co., New York.  
National India Rubber Co., Bristol, R. I.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston—New York.

## Mould Work.

(See Mechanical Rubber Goods.)

H. O. Canfield Co., Bridgeport, Ct.  
Continental Rubber Works, Erie, Pa.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Dayton Rubber Mfg. Co., Dayton, O.  
Faulstich Rubber Co., Akron, O.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Hodgman Rubber Co., New York.  
Manhattan Rubber Mfg. Co., New York.  
Massachusetts Chemical Co., Walpole, Mass.  
Mattson Rubber Co., Lodi, N. J.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.  
Western Rubber Works, Goshen, Ind.

## Oil Well Supplies.

Boston Belting Co., Boston—New York.  
Boston Woven Hose & Rubber Co., Cleveland, O.  
Continental Rubber Works, Erie, Pa.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Home Rubber Co., Trenton, N. J.  
Lake Shore Rubber Co., Erie, Pa.

Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston—Pittsburgh.  
Voorhees Rubber Mfg. Co., Jersey City.

## Packing.

(See Mechanical Rubber Goods.)

Dayton Rubber Mfg. Co., Dayton, O.  
Jenkins Bros., New York.  
Manhattan Rubber Mfg. Co., New York.  
Mattson Rubber Co., Lodi, N. J.  
New Jersey Car Spring & Rubber Co., New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Paper Machine Rollers.

Boston Belting Co., Boston—New York.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Manhattan Rubber Mfg. Co., New York.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston—New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Plumbers' Supplies.

Canadian Rubber Co., Montreal.  
H. O. Canfield Co., Bridgeport, Ct.  
Continental Rubber Works, Erie, Pa.  
B. F. Goodrich Co., Akron, O.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Manhattan Rubber Mfg. Co., New York.  
Mattson Rubber Co., Lodi, N. J.  
Republic Rubber Co., Youngstown, O.  
Western Rubber Works, Goshen, Ind.

## Pump Valves.

(See Mechanical Rubber Goods.)

Continental Rubber Works, Erie, Pa.  
Dayton Rubber Mfg. Co., Dayton, O.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Jenkins Bros., New York.  
Manhattan Rubber Mfg. Co., New York.  
Mattson Rubber Co., Lodi, N. J.  
New York Belting & Packing Co., N. Y.  
Revere Rubber Co., Boston—New York.  
Western Rubber Works, Goshen, Ind.

## Rolls—Rubber Covered.

Acme Rubber Mfg. Co., Trenton, N. J.  
Boston Belting Co., Boston.  
Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Continental Rubber Works, Erie, Pa.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mattson Rubber Co., Lodi, N. J.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston—New York.

## Sewing Machine Rubbers.

Continental Rubber Works, Erie, Pa.  
B. F. Goodrich Co., Akron, O.

## Springs—Rubber.

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston—New York.  
Canadian Rubber Co., Montreal.  
Continental Rubber Works, Erie, Pa.  
Dayton Rubber Mfg. Co., Dayton, O.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Manhattan Rubber Mfg. Co., New York.  
Mattson Rubber Co., Lodi, N. J.  
National India Rubber Co., Bristol, R. I.  
N. J. Car Spring & Rubber Co., Jersey City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston—New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Stair Treads.

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston—New York.  
Boston Woven Hose & Rubber Co., Cleveland, O.  
Canadian Rubber Co., Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Continental Rubber Works, Erie, Pa.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.



## RUBBER BUYERS' DIRECTORY—Continued.

## Stair Treads—Continued.

Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co.  
of Toronto, Ltd.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York  
National India Rubber Co., Bristol, R. I.  
N. J. Car Spring & Rubber Co., Jersey  
City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Vorhees Rubber Mfg. Co., Jersey City.

## Thread.

B. F. Goodrich Co., Akron, O.  
Davidson Rubber Co., Providence, R. I.  
Revere Rubber Co., Boston—New York.

## Tiling.

Canadian Rubber Co., of Montreal, Ltd.  
Continental Rubber Works, Erie, Pa.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring and Rubber Co., Jer-  
sey City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Vorhees Rubber Mfg. Co., Jersey City.

## Tubing.

(See Mechanical Rubber Goods.)  
American Hard Rubber Co., New York.  
Continental Rubber Works, Erie, Pa.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Dayton Rubber Mfg. Co., Dayton, O.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Manhattan Rubber Mfg. Co., New York.  
Mattson Rubber Co., Lodi, N. J.  
Plymouth Rubber Co., Stoughton, Mass.  
New Jersey Car Spring & Rubber Co.  
New York Belting & Packing Co., N. Y.  
Tyer Rubber Co., Andover, Mass.

## Valve Balls.

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Continental Rubber Works, Erie, Pa.  
Dayton Rubber Mfg. Co., Dayton, O.  
B. F. Goodrich Co., Akron, O.  
Jenkins Bros., New York.  
Manhattan Rubber Mfg. Co., New York.  
Mattson Rubber Co., Lodi, N. J.  
Mechanical Rubber Co., Chicago.  
National India Rubber Co., Bristol, R. I.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston—New York.

## Valve Discs.

American Hard Rubber Co., New York.  
Boston Belting Co., Boston—New York.  
Continental Rubber Works, Erie, Pa.  
Dayton Rubber Mfg. Co., Dayton, O.  
B. F. Goodrich Co., Akron, O.  
Manhattan Rubber Mfg. Co., New York.  
Mattson Rubber Co., Lodi, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Western Rubber Works, Goshen, Ind.

## Valves.

(See Mechanical Rubber Goods.)  
Continental Rubber Works, Erie, Pa.  
Dayton Rubber Mfg. Co., Dayton, O.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Jenkins Bros., New York-Chicago.  
Mattson Rubber Co., Lodi, N. J.  
New Jersey Car Spring & Rubber Co.  
New York Belting & Packing Co., N. Y.  
**Vulcanite Emery Wheels.**  
Manhattan Rubber Mfg. Co., Passaic,  
N. J.  
New York Belting & Packing Co., Ltd.,  
New York.

## Wringer Rolls.

Canadian Rubber Co., of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Continental Rubber Works, Erie, Pa.  
Dayton Rubber Mfg. Co., Dayton, O.  
B. F. Goodrich Co., Akron, O.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mattson Rubber Co., Lodi, N. J.  
New York Belting & Packing Co., N. Y.  
Republic Rubber Co., Youngstown, O.

DRUGGISTS' AND STA-  
TIONERS' SUNDRIES.

## Atomizers.

## Bandages.

## Bulbs.

## Syringes.

## Water Bottles.

## Druggists' Sundries—General.

American Hard Rubber Co., New York.  
C. J. Bailey & Co., Boston.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., of Montreal.  
Canton Rubber Co., Canton, O.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York-Boston.  
L. & M. Rubber Works, Canton, Ohio.  
Luzerne Rubber Co., Trenton, N. J.  
National India Rubber Co., Bristol, R. I.  
North British Rubber Co., Ltd., Edin-  
burgh.  
Pirelli & Co., Milan, Italy.  
Seamless Rubber Co., New Haven, Ct.  
Tyer Rubber Co., Andover, Mass.

## Balls, Dolls and Toys.

New York Rubber Co., New York.

## Combs.

American Hard Rubber Co., New York.

## Elastic Bands.

Canadian Rubber Co., of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.

## Erasive Rubbers.

Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.

## Finger Cots.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Faultless Rubber Mfg. Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
The Rubber Products Co., Barberton, O.

## Gloves.

Canadian Rubber Co., of Montreal.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
National India Rubber Co., Bristol, R. I.  
Rubber Products Co., Barberton, O.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
Canadian Rubber Co., of Montreal.  
Davidson Rubber Co., Boston.  
H. O. Canfield Co., Bridgeport, Ct.  
Daval Rubber Co., Providence, R. I.  
Household Rubber Co., Youngstown, O.  
Luzerne Rubber Co., Trenton, N. J.  
Stokes Rubber Co., Joseph, Trenton, N. J.  
Tyer Rubber Co., Andover, Mass.

## Hospital Sheatings.

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
National India Rubber Co., Bristol, R. I.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

## Ice Bags and Ice Caps.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
National India Rubber Co., Bristol, R. I.  
The Rubber Products Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Life Preservers.

Hodgman Rubber Co., New York.  
National India Rubber Co., Bristol, R. I.

## Nipples.

Canadian Rubber Co., of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
The Rubber Products Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

## Shower Bath Sprinklers.

A. Schrader's Son, Inc., New York.

## Sponges (Rubber).

Faultless Rubber Co., Ashland, O.  
N. Tire Rubber Sponge Co., Chicago.

## Stationers' Sundries.

American Hard Rubber Co., New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., of Montreal.  
Cincinnati Rubber Mfg. Co., Cincinnati,  
Ohio.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York-Boston.  
Seamless Rubber Co., New Haven, Ct.  
Tyer Rubber Co., Andover, Mass.

## Stopples (Rubber).

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Manhattan Rubber Mfg. Co., New York.  
National India Rubber Co., Bristol, R. I.  
New York Belting & Packing Co., N. Y.  
A. Schrader's Son, Inc., New York.  
Tyer Rubber Co., Andover, Mass.

## Throat Bags.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
National India Rubber Co., Bristol, R. I.  
Tyer Rubber Co., Andover, Mass.

## Tobacco Pouches.

Canadian Rubber Co., of Montreal.  
Davidson Rubber Co., Boston.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
The Rubber Products Co., Barberton, O.  
Tyer Rubber Co., Andover, Mass.

MACKINTOSHED AND  
SURFACE GOODS.

## Air Cushions.

Metropolitan Air Goods Co., Reading,  
Mass.

## Air Goods (Rubber).

Canadian Rubber Co., of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Metropolitan Air Goods Co., Reading,  
Mass.  
New York Rubber Co., New York.  
National India Rubber Co., Providence.  
Tyer Rubber Co., Andover, Mass.

## Air Mattresses.

Canadian Rubber Co., of Montreal.  
Metropolitan Air Goods Co., Reading,  
Mass.  
Mechanical Fabric Co., Providence, R. I.  
National India Rubber Co., Bristol, R. I.

## Barbers' Bibs.

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
Tyer Rubber Co., Andover, Mass.

## Bathing Caps.

Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.

## Bellows Cloths.

Boston Rubber Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.

## Calendering.

Plymouth Rubber Co., Stoughton, Mass.

## Carriage Ducks and Drills.

Acme Rubber Mfg. Co., Trenton, N. J.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Gutta Percha & Rubber Mfg. Co., To-  
ronto.  
National India Rubber Co., Bristol, R. I.

## Clothing.

Canadian Rubber Co., of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Gutta Percha & Rubber Mfg. Co., To-  
ronto.  
Hodgman Rubber Co., New York.  
National India Rubber Co., Bristol, R. I.  
North British Rubber Co., Ltd., Edin-  
burgh.  
Pirelli & Co., Milan, Italy.

## Cravenette.

Cravenette Co., Ltd.

## Diving Apparatus.

A. Schrader's Son, Inc., New York.  
Hodgman Rubber Co., New York.

## Horse Covers.

Hodgman Rubber Co., New York.  
National India Rubber Co., Bristol, R. I.

## Leggings.

Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.  
National India Rubber Co., Bristol, R. I.

## Mackintoshes.

(See Clothing.)

## Proofing.

Canadian Rubber Co., of Montreal.  
Plymouth Rubber Co., Stoughton, Mass.

## Rain Coats.

Cravenette Co., Ltd.  
Rubber Coated Cloths.  
Mechanical Fabric Co., Providence, R. I.

## RUBBER FOOTWEAR.

## Boots and Shoes.

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Canadian Rubber Co., of Montreal.  
L. Candee & Co., New Haven, Ct.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., of To-  
ronto.  
Hood Rubber Co., Boston.  
Looming Rubber Co., Williamsport, Pa.  
Meyer Rubber Co., New York.  
National India Rubber Co., Boston.  
North British Rubber Co., Ltd., Edin-  
burgh.  
United States Rubber Co., New York.  
Wales-Goodyear Rubber Co., Boston.  
Woonsocket Rubber Co., Providence.

## Heels and Soles.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., of Montreal.  
Continental Cautchouc & Guttapereh  
Co., Hanover.

The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.

Plymouth Rubber Co., Stoughton, Mass.  
Springfield Tire & Rubber Co., Spring-  
field, Ohio.

Western Rubber Works, Goshen, Ind.

## Tennis Shoes.

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
National India Rubber Co., Providence.  
United States Rubber Co., New York.

## Wading Pants.

Canadian Rubber Co., of Montreal.  
Hodgman Rubber Co., New York.

DENTAL AND STAMP  
RUBBER.

## Dental Gum.

American Hard Rubber Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Tyer Rubber Co., Andover, Mass.

## Rubber Dam.

Cleveland Rubber Co., Cleveland, O.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

## Stamp Gum.

B. F. Goodrich Co., Akron, O.  
Mattson Rubber Co., Lodi, N. J.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey  
City, N. J.  
New York Belting & Packing Co., N. Y.

## ELECTRICAL.

## Electrical Supplies.

American Hard Rubber Co., New York.  
Lake Shore Rubber Co., Erie, Pa.  
Joseph Stokes Rubber Co., Trenton, N. J.  
Massachusetts Chemical Co., Boston.  
Mattson Rubber Co., Lodi, N. J.  
Tyer Rubber Co., Andover, Mass.

## Friction Tape.

Acme Rubber Mfg. Co., Trenton, N. J.  
Boston Belting Co., Boston.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Massachusetts Chemical Co., Boston.  
Mechanical Rubber Co., Chicago.  
National India Rubber Co., Bristol, R. I.  
Revere Rubber Co., Boston-New York.



## RUBBER BUYERS' DIRECTORY—Continued.

**Hard Rubber Goods.**

American Hard Rubber Co., New York.  
Canadian Rubber Co. of Montreal.

Luscombe Rubber Co., Trenton, N. J.  
Joseph Stokes Rubber Co., Trenton, N. J.

**Insulating Compounds.**

Canadian Rubber Co. of Montreal.  
Gutta-Percha & Rubber Mfg. Co., Toronto.

Massachusetts Chemical Co., Boston.

**Insulated Wire and Cables.**

Acme Rubber Mfg. Co., Trenton, N. J.  
The Indiana Rubber and Insulated Wire Co., Jonesboro, Indiana.

National India Rubber Co., Providence.

**Splicing Compounds.**

Home Rubber Co., Trenton, N. J.  
Massachusetts Chemical Co., Walpole, Mass.

**SPORTING GOODS.****Foot Balls.**

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Faultless Rubber Co., Akron, O.

B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
National India Rubber Co., Bristol, R. I.

**Golf Balls.**

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.

Davidson Rubber Co., Boston.  
B. F. Goodrich Co., Akron, O.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.

**Sporting Goods.**

Canadian Rubber Co. of Montreal.  
Faultless Rubber Co., Akron, O.

B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

**Striking Bags.**

Canadian Rubber Co. of Montreal.  
Cleveland Rubber Co., Cleveland, O.

Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Rubber Products Co., Barberton, O.

**Submarine Outfits.**

Hodgman Rubber Co., New York.  
A. Schrader's Sons, Inc., New York.

**MISCELLANEOUS.****Boxes (Wood).**

Henry H. Shelp & Co., Philadelphia.

**Brass Fittings.**

A. Schrader's Son, Inc., New York.

**Cement (Rubber).**

Boston Belting Co., Boston.  
Canadian Rubber Co. of Montreal.

B. F. Goodrich Co., Akron, O.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.

New York Belting & Packing Co., N. Y.

**Chemical and Mechanical Engineer.**

Charles E. Farrington, Boston.

**Chemists.**

Stephen P. Sharples, Boston, Mass.

**Consulting Engineers.**

Akron Rubber Engineering Co., Akron, O.  
M. P. Fillingham, New York.

**Rubber Journals.**

Gummi-Zeitung, Dresden, Germany.  
L'Agriculture des Pays Chauds, France.

**Rubber Tree Seeds.**

J. P. William & Bros., Heeratsgoda, Ceylon.

**Scrap Metals.**

Robert L. Crooke, New York.

**Stair Nosings.**

The Painesville Metallic Binding Co., Painesville, Ohio.

**Tapping Tools.**

G. Van den Kerckhove, Brussels, Belgium.

**Valves for Air Goods.**

A. Schrader's Son, Inc., New York.

## MACHINERY AND SUPPLIES FOR RUBBER MILLS.

**RUBBER MACHINERY.****Acid Tanks.**

Birmingham Iron Foundry, Derby, Conn.

**Band Cutting Machines.**

A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Conn.

**Belt Folding Machines.**

Birmingham Iron Foundry, Derby, Conn.  
Farrel Foundry & Mach. Co., Ansonia, Conn.

**Belt Slitters.****Cloth Dryers.****Gearing.****Shafting.****Wrapping Machines.**

Birmingham Iron Foundry, Derby, Conn.  
Farrel Foundry & Mach. Co., Ansonia, Conn.

**Belt Stretchers.**

Birmingham Iron Foundry, Derby, Conn.  
Farrel Foundry & Mach. Co., Ansonia, Conn.  
Hogson & Pettis Mfg. Co., New Haven.

**Boilers.**

William R. Thropp, Trenton, N. J.  
John R. Thropp & Sons Co., Trenton, N. J.

**Braiders.**

New England Butt Co., Providence, R. I.

**Calenders.**

Birmingham Iron Foundry, Derby, Conn.  
David Bridge & Co., Castleton, Manchester, Eng.  
Farrel Foundry & Mach. Co., Ansonia, Conn.  
Textile-Finishing Machinery Co., Providence, R. I.

**Castings.**

A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Conn.  
Farrel Foundry & Mach. Co., Ansonia, Conn.

**Chucks (Laths).**

Hogson & Pettis Mfg. Co., New Haven.

**Churns.**

American Tool & Machine Co., Boston.

**Clutches.**

Farrel Foundry & Mach. Co., Ansonia, Conn.

**Crackers.**

Birmingham Iron Foundry, Derby, Conn.

**Devulcanizers.**

Biggs Boiler Works Co., Akron, O.  
Birmingham Iron Foundry, Derby, Conn.

**Dies.**

John J. Adams, Worcester, Mass.  
Boston Die Co., Boston.  
Hogson & Pettis Mfg. Co., New Haven.

**Doubling Machines.**

American Tool & Machine Co., Boston.

**Drying Machines.**

David Bridge & Co., Castleton, Manchester, Eng.  
Joseph P. Devine, Buffalo, N. Y.  
Birmingham Iron Foundry, Derby, Conn.  
Textile-Finishing Machinery Co., Providence, R. I.

**Embossing Calenders.**

Textile-Finishing Machinery Co., Providence, R. I.

**Engines, Steam.**

William R. Thropp, Trenton, N. J.  
John R. Thropp & Sons Co., Trenton, N. J.

**Engraving Rolls.**

Hogson & Pettis Mfg. Co., New Haven.

**Grinders and Mixers.**

Birmingham Iron Foundry, Derby, Conn.  
Farrel Foundry & Mach. Co., Ansonia, Conn.  
William R. Thropp, Trenton, N. J.

**Hangers.**

Farrel Foundry & Mach. Co., Ansonia, Conn.

**Hose Machines.**

A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Conn.  
New England Butt Co., Providence, R. I.

**Hydraulic Accumulators.**

Birmingham Iron Foundry, Derby, Conn.  
Farrel Foundry & Mach. Co., Ansonia, Conn.

**Insulating Machinery.**

John Royle & Sons, Paterson, N. J.

**Lasts (Rubber Shoe).**

Middlesex Last Co., Boston.

**Lathes—Hard Rubber.**

A. Adamson, Akron, O.

**Lathes—Jar Ring.**

A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Conn.  
William R. Thropp, Trenton, N. J.

**Machinists' Tools.**

Hogson & Pettis Mfg. Co., New Haven.

**Moulds.**

A. Adamson, Akron, O.  
Birmingham Iron Foundry, Derby, Conn.

Bridgewater Machine Co., Akron, O.  
Hogson & Pettis Mfg. Co., New Haven.  
Williams Foundry & Machine Co., Akron, Ohio.

**Pillow Blocks.**

Farrel Foundry & Mach. Co., Ansonia, Conn.

**Porcelain Forms for Dipped Goods.**

Colonial Sign and Insulator Co., South Akron, Ohio.

**Presses (for Rubber Work).**

A. Adamson, Akron, O.  
Bay State Machine Co., Erie, Pa.  
Birmingham Iron Foundry, Derby, Conn.  
Boomer & Boechert Press Co., Syracuse, N. Y.  
Edred W. Clark, Hartford, Conn.  
Farrel Foundry & Mach. Co., Ansonia, Conn.  
William R. Perrin & Co., Chicago Ill.  
William R. Thropp, Trenton, N. J.  
Williams Foundry & Machine Co., Akron, Ohio.

**Pumps.**

Birmingham Iron Foundry, Derby, Conn.  
Boomer & Boechert Press Co., Syracuse, N. Y.  
Farrel Foundry & Mach. Co., Ansonia, Conn.

**Racks for Boot and Shoe Cars.**

Hogson & Pettis Mfg. Co., New Haven.

**Reducing Valves.**

Mason Regulator Co., Boston.

**Rollers (Hand).**

Hogson & Pettis Mfg. Co., New Haven.

**Rubber Covering Machines.**

New England Butt Co., Providence, R. I.

**Special Rubber Machinery.**

Wellman Co., Medford, Mass.

**Spreaders.**

American Tool & Machine Co., Boston.  
Birmingham Iron Foundry, Derby, Conn.  
New England Butt Co., Providence, R. I.

**Steam Traps and Specialties.**

Jenkins Bros., New York.  
Mason Regulator Co., Boston.  
Osgood Sayen, Philadelphia, Pa.

**Steel Stamps.**

Hogson & Pettis Mfg. Co., New Haven.

**Stitchers (Hand).**

Hogson & Pettis Mfg. Co., New Haven.

**Strip Covering Machines.**

Strip Cutters.

**Strip Cutters.**

New England Butt Co., Providence, R. I.

**Tire Molds.**

Bay State Machine Co., Erie, Pa.  
Williams Foundry & Machine Co., Akron, Ohio.

**Tubing Machines.**

A. Adamson, Akron, O.  
Bay State Machine Co., Erie, Pa.  
Edred W. Clark, Hartford, Conn.  
John Royle & Sons, Paterson, N. J.  
Williams Foundry & Machine Co., Akron, Ohio.

**Vacuum Drying Chambers.**

Buffalo Foundry & Machine Co., Buffalo, N. Y.  
Joseph P. Devine Co., Buffalo, N. Y.  
F. J. Stokes Machine Co., Philadelphia, Pa.

**Varnishing Machines.**

Birmingham Iron Foundry, Derby, Conn.

**Vulcanizers.**

Biggs Boiler Works Co., Akron, O.  
Birmingham Iron Foundry, Derby, Conn.  
Farrel Foundry & Mach. Co., Ansonia, Conn.  
John R. Thropp's Sons Co., Trenton, N. J.  
William R. Thropp, Trenton, N. J.

**Washers.**

Birmingham Iron Foundry, Derby, Conn.  
David Bridge & Co., Castleton, Manchester, Eng.  
Continental Rubber Works, Erie, Pa.  
Farrel Foundry & Mach. Co., Ansonia, Conn.  
William R. Thropp, Trenton, N. J.  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**Wire Insulating Machines.**

New England Butt Co., Providence, R. I.  
John Royle & Sons, Paterson, N. J.

**SECOND-HAND MACHINERY.**

Philip McGroarty, Trenton, N. J.  
M. Norton & Co., Charlestown, Mass.

**FACTORY SUPPLIES.****Aluminum Flake.**

Aluminum Flake Co., Akron, O.

**Antimony, Sulphurets of.**

Golden.  
Actien-Ges. Georg Hegstorf's Salzwärke, Linden, Germany.  
Atlas Chemical Co., Newtonville, Mass.  
Golden and Crimmon.  
Joseph Center, New York.

**MACHINERY AND SUPPLIES FOR RUBBER MILLS—Continued.****Antimony, Sulphurets of.—Continued.**

Golden and Crinson,  
Wm. H. Scheel, New York.  
Stamford (Conn.) Rubber Supply Co.  
Type & King, London, England.

**Ralata.**

George A. Alden & Co., Boston.

**Benzol.**

Samuel Cabot, Boston.

**Black Hypo.**

Joseph Cantor, New York.  
William H. Scheel, New York.  
Type & King, London, England.

**Carbon Bisulphide.**

George W. Speaight, New York.

**Chemicals.**

Massachusetts Talc Co., Boston.  
Oxford Tripoli Co., New York.  
George W. Speaight, New York.  
S. P. Wetherill Co., Philadelphia, Pa.

**Colors.**

Joseph Cantor, New York.  
William H. Scheel, New York.  
Type & King, London, England.  
S. P. Wetherill Co., Philadelphia, Pa.

**Crude Rubber.**

George A. Alden & Co., Boston.  
Wallace L. Gough Co., New York.  
Hagermeyer & Brun, New York.  
Adolph Hirsch & Co., New York.  
Livsey & Co., Ltd., New York.  
Rubber Trading Co., New York-Boston.

**Dermatine.**

The Dermatine Co., London.

**Ducks and Drills (Cotton).**

J. H. Lane & Co., New York.

**Gilaonite.**

William H. Scheel, New York.

**Graphite Grease.**

Jos. Dixon Crucible Co., Jersey City.

**Guayule Rubber.**

Continental Rubber Co.  
Ed. Maurer, New York.

**Gutta-Percha.**

George A. Alden & Co., Boston.  
Rubber Trading Co., New York-Boston.

**Hydro-Carbon Products.**

Geo. A. Alden & Co., Boston.  
William H. Scheel, New York.  
Raven Mining Co., Chicago.

**Infusorial Earth.**

Stamford (Conn.) Rubber Supply Co.

**Kapak.**

Raven Mining Co., Chicago.

**Lampblack.**

Samuel Cabot, Boston.

**Lead—Blue.****Lead—Sublimed White.**

Picher Lead Co., Chicago, Ill.

**Lithopone.**

Gabriel & Schall, New York.

**Mineral Rubber.**

Geo. A. Alden & Co., Boston.

**Paris White and Whiting.**

H. F. Taintor Mfg. Co., New York.

**Reclaimed Rubber.**

Aladdin Rubber Co., Akron, O.  
Alkali Rubber Co., Akron, O.  
F. H. Appleton & Son, Boston.

Bloomington (N. J.) Soft Rubber Co.  
H. H. Clapp Rubber Co., Boston, Mass.  
Danversport Rubber Co., Boston.  
Derby Rubber Co., Derby, Conn.  
Eastern Rubber Co., New York.  
Manufactured Rubber Co.  
New Jersey Rubber Co., Lambertville, N. J.  
Pequanoe Rubber Co., Butler, N. J.  
Philadelphia Rubber Works, Philadelphia.  
Rickaby Rubber Mfg. Co., South Framingham, Mass.  
Robinson & Stiles, New York.  
Stockton Rubber Co., Stockton, N. J.  
Jos. Stokes Rubber Co., Trenton, N. J.  
S. & L. Rubber Co., Chester, Pa.  
Trenton (N. J.) Rubber Reclaiming Works.  
U. S. Rubber Reclaiming Works, N. Y.  
Westmoreland Rubber Mfg. Co., Grapeville, Pa.

**Agents and Dealers.**

Phillip McGroary, Trenton, N. J.  
H. P. Moorhouse, Paris, France.  
Rubber Trading Co., New York-Boston.  
Wm. Somerville's Sons, Liverpool.

**Scrap Rubber.**

L. Albert & Son, Trenton, N. J.  
Bers & Co., Philadelphia.  
M. Bersen & Co., New York.  
P. Broomfield & Co., Boston.  
Wm. H. Cummings & Sons, New York.  
Gordon & Rosenthal, Trenton, N. J.  
Green, Hans L., & Co., New York.  
Theodore Hofeller & Co., Buffalo, N. Y.  
M. Kaufman, Chicago.  
A. W. Leslie & Co., Ltd., London, Eng.  
B. Loewenthal & Co., New York and Chicago.  
J. Loewenthal & Sons, Chicago.  
Phillip McGroary, Trenton, N. J.  
Meyer Bros., Philadelphia, Pa.  
Albert A. Moers, New York.  
M. Norton & Co., Charlestown, Mass.  
E. Pariser & Brodsky, Antwerp.

J. Schaurmann, London.  
Schwab & Co., Philadelphia.  
Trenton Scrap Rubber Supply Co., Trenton, N. J.  
United States Waste Rubber Co., Brockton, Mass.  
M. J. Wolpert, Odessa, Russia.

**Substitute.**

T. C. Ashley, Boston.  
Joseph Cantor, New York.  
Carter, Bell Mfg. Co., New York.  
Corn Products Refining Co., New York.  
C. P. Dos Santos, New York.  
Massachusetts Chemical Co., Boston.  
The Rubber Chemical Co., Birmingham, England.  
Wm. H. Scheel, New York.  
Stamford (Conn.) Rubber Supply Co.  
Sterling Mfg. Co., Gloucester, Mass.  
Type & King, London, England.  
Robert E. Tyson, Fairfield, Conn.

**Sulphur.**

Battelle & Renwick, New York.  
T. & S. C. White Co., New York.

**Sulphur Chloride.**

William H. Scheel, New York.  
George W. Speaight, New York.  
Stamford (Conn.) Rubber Supply Co.

**Whiting.**

H. F. Taintor Mfg. Co., New York.

**Zinc, Oxide of.**

New Jersey Zinc Co., New York.

**Zinc Substitute.**

Aluminum Flake Co., Akron, O.

**Zinc Sulphide.**

Joseph Cantor, New York.  
Type & King, London, England.

**BUYERS' DIRECTORY FOR RUBBER TIRES AND ACCESSORIES.****Auto Top Fabrics.**

Hodgman Rubber Co., New York.  
National India Rubber Co., Bristol, R. I.

**Fabrics.**

Lane & Co., J. H., New York.  
National India Rubber Co., Bristol, R. I.

**Insulated Wires.**

The Indiana Rubber and Insulated Wire Co., Jonesboro, Indiana.  
National India Rubber Co., Bristol, R. I.

**Mats, Automobile.**

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co., Cambridge, Mass.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Manhattan Rubber Mfg. Co., New York.  
National India Rubber Co., Bristol, R. I.  
Revere Rubber Co., Boston, Mass.

**Repair Stock.**

Trenton Rubber Mfg. Co., Trenton, N. J.  
Rims, Wheel.  
Goodrich Co., B. F., Akron, Ohio.

**Tires.**

Bailey & Co., C. J., Boston, Mass.  
Canadian Rubber Co., of Montreal, Ltd.  
Continental Caoutchouc Co., New York.  
Continental Rubber Works, Erie, Pa.  
Dunlop Tire & Rubber Goods Co., Toronto.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Goodrich Co., B. F., Akron, Ohio.  
Gutta Percha & Rubber Mfg. Co., Toronto.  
The Indiana Rubber and Insulated Wire Co., Jonesboro, Indiana.  
Kokomo Rubber Co., Kokomo, Ind.  
Lake Shore Rubber Co., Erie, Pa.  
North British Rubber Co., Ltd., Edinburgh, Scotland.  
Pirelli & Co., Milan, Italy.  
Springfield Tire & Rubber Co., Springfield, O.

Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, Ohio.  
Trenton Rubber Mfg. Co., Trenton, N. J.

**Automobile and Carriage.**

Acme Rubber Mfg. Co., Trenton, N. J.  
Boston Belting Co., Boston-New York.  
Revere Rubber Co., Boston-New York.

**Tire Fabrics.**

Lane & Co., J. H., New York.

**Tire Repairing.**

Voorhees Rubber Mfg. Co., Jersey City, N. J.

**Treads.**

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co., Cambridge, Mass.

Manhattan Rubber Mfg. Co., New York.

Revere Rubber Co., Boston, Mass.

**Valves, Tire.**

Dubied & Co., Ed., 43-45 West 34th St., New York.  
Schrader's Sons, Inc., A., New York.

**THE H. O. CANFIELD CO.,****MANUFACTURE**

**Moulded Specialties, Plumbers' Rubber Goods, Valves, Gaskets; Hose Washers; and Cut Washers of all kinds.**

*Write for prices and samples.*

**Office and Works - - BRIDGEPORT, CT.**

*Mention the India Rubber World when you write.*

**Vitreous Porcelain Forms**

**Do Not Craze When Passing Through Steam or Acid Cure.**

Glove Forms, Syringe Bags, Bust Forms and Cots.

**COLONIAL SIGN AND****INSULATOR CO.,**

**SOUTH AKRON, OHIO.**



ESTABLISHED 1868

E. H. Clapp Rubber Co.

MANUFACTURERS

OF ALL KINDS OF

RECLAIMED  
RUBBER



OFFICES:

No. 49 FEDERAL STREET, BOSTON

---

FACTORIES: HANOVER, MASS.

Cable Address: "Clarub."



# REVERE RUBBER COMPANY.

Manufacturers of a  
HIGH CLASS of

## MECHANICAL RUBBER GOODS.

HOME OFFICE:  
77 Bedford Street,  
BOSTON, MASSACHUSETTS.

BRANCHES:

NEW YORK, N. Y., 59 Reade Street.  
PITTSBURGH, PA., 301 Hartie Bldg.  
CHICAGO, ILL., 168 Lake Street.  
MINNEAPOLIS, MINN., 322 First Ave., North.  
NEW ORLEANS, LA., 700 Baronne Street.  
SAN FRANCISCO, CAL., 532 Mission Street.

FACTORIES:

CHELSEA, MASSACHUSETTS.

*Mention The India Rubber World when you write.*

